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COLEOPTERA.

RHYNCHOPHORA:—CURCULIONIDÆ.

BY

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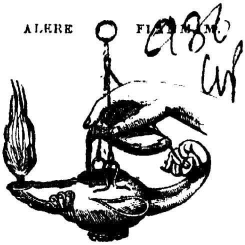
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CONTENTS.

Page

- AUTHOR'S PREFACE v
- GLOSSARY ix
- SYSTEMATIC INDEX xi
- INTRODUCTION 1
  - Structure of the Imago 6
  - Sexual Dimorphism 16
  - Stridulation 17
  - Larvæ 17
  - Habits and Life-Histories 19
  - Classification 26
- Suborder RHYNCHOPHORA 1
- TABLE OF FAMILIES OF RHYNCHOPHORA 3
  - *Curculionidæ* 4
- TABLE OF DIVISIONS OF CURCULIONIDÆ 28
  - *Adelognathi* 28
- TABLE OF SUBFAMILIES OF CURCULIONIDÆ 29
  - *Brachyderinæ* 30
  - *Otiorrhynchinæ* 204
- TABLE OF GROUPS OF BRACHYDERINÆ 30
  - *Blosyrides* 30
  - *Naupactides* 44
  - *Cneorrhinides* 47
  - *Cyphides* 50
  - *Tanymecides* 58
- TABLE OF GROUPS OF OTIORRHYNCHINÆ 204
  - *Episomides* 204
  - *Nothognathides* 250
  - *Otiorrhynchides* 252
  - *Trachyphlœides* 275
  - *Phyllobiides* 278
- ALPHABETICAL INDEX 361

AUTHOR'S PREFACE.

IT is now over nine years since the preparation of this volume was first begun, the pressure of other work having continually hindered its completion. It was inevitable that during so long a period changes should have taken place in one's opinions and methods, and as it was impossible to re-examine all the material dealt with in the earlier stages, certain inequalities of treatment have resulted, for which indulgence must be asked.

It is with the greatest pleasure that I acknowledge my indebtedness to numerous friends and correspondents, without whose kindly assistance I could not have hoped to complete this first instalment of my work. Of the older collections of CURCULIONIDÆ the most important is that in the Stockholm Museum, which contains the types of Gyllenhal, Boheman, Chevrolat, etc., and all of these have been entrusted to me for examination by my friend Prof. Dr. Yngve Sjöstedt; while both he and Prof. Dr. C. Aurivillius have helped me with most engaging kindness during my various visits to their beautiful city. Of modern collections of CURCULIONIDÆ, by far the most important is that accumulated by the distinguished specialist on this family, the late Johannes Faust, who described some 2300 new species from all parts of the world. This collection is now in the Dresden Museum under the charge of Dr. K. M. Keller, to whom I am under a great obligation for the loan of numerous types of species described by both Faust and himself. In the Civic Museum at Genoa there is a valuable collection of Coleoptera made in

Burma by Leonardo Fea containing nearly 200 new species of Weevils described by Faust; of these Dr. R. Gestro has been good enough to entrust to me not merely the types of the species I required, but the whole series of specimens in each case. Mr. H. E. Andrewes has greatly assisted my work by placing at my disposal a fine collection of Indian Weevils, all named by Faust and comprising numerous co-types. I have also to express my thanks to the following gentlemen for the loans of various types:—Prof. E. B. Poulton, F.R.S., for the Schönherrian types from the Hope collection, Oxford ; the late Prof. Dr. Ganglbauer of Vienna, for types of species described by Redtenbacher from Kashmir; Prof. Kolbe, of the Zoological Museum at Berlin, for some of Herbst's types; Dr. Taschenberg, of Halle, for types from Germar's collection; M. Severin and Dr. H. Schouteden, of the Brussels Museum, for types described by Desbrochers des Loges ; the late M. Desbrochers des Loges, for types from his own collection; and Dr. N. Annandale, of the Indian Museum, for types of various species described by Faust and Desbrochers.

This work has been principally based on the fine series of Indian species contained in the British Museum, and I cannot refrain from expressing my sincere thanks to Mr. G. J. Arrow, of that Institution, for the courteous assistance which he has always so readily afforded me. But a very large supply of unnamed material has also been received from various correspondents in India and on the Continent, among whom my special thanks are due to Prof. H. Maxwell Lefroy ; Mr. T. Bainbrigge Fletcher, Imperial Entomologist, Pusa ; Mr. F. H. Gravely, Indian Museum, Calcutta ; Dr. A. D. Imms ; Mr. C. F. C. Beeson, Imperial Forest Zoologist, Dehra Dun ; Mr. E. Ballard, Government Entomologist, Madras; Mr. E. E. Green, late Government Entomologist, Ceylon; M. Severin, of the Brussels Museum; M. Albert Bovie, of Brussels; M. Pierre Lesne, of the Paris Museum; and particularly to Mr. H. E. Andrewes, who has entrusted to me the rich collection made by his nephew, Mr. H. L. Andrewes, principally in the Nilgiri Hills, together with much interesting material received from his other correspondents, including Mr. T. R. D. Bell, Capt. A. K. Weld Downing, Mr. C. Somers Smith, Mr. H. Stevens, and the late Mr. G. Q. Corbett. Mr. Andrewes has generously permitted the types of practically all the new species described from his collection to be presented to the British Museum.

In 1871, when Gemminger and Harold published their Catalogue of the CURCULIONIDÆ of the World the total number of species recorded from within the limits of this Fauna was only 324. At the time of Faust's death in 1903, the number had risen to approximately 1000. In this volume 342 species are dealt with, of which just over one-half are here described for the first time. On this basis it is estimated that the number of Indian species at present existing in collections must be little short of 2000; and when the country has been properly worked by competent collectors, it is more than likely that that number will be doubled.

GUY A. K. MARSHALL.

October, 1916.

GLOSSARY OF TECHNICAL TERMS.*

♂, indicates the male ; ♀, the female.

Acuminate, terminating in a point.

Apex, that end of a limb or segment which is the more remote from an imaginary line lying between the prothorax and elytra.

Base, that end of a limb or segment which is nearer to the imaginary line just referred to ; thus the base of the prothorax meets the base of the elytra and the base of the scutellum.

Bifid, cleft in two.

Buccal cavity, the opening at the end to the rostrum which contains the mouth-parts.

Callus, a comparatively large, rounded prominence.

Carina, a narrow and usually rather sharp ridge.

Cephalic, belonging to the head.

Clavate, terminating in a club.

Compressed, flattened as if by lateral pressure.

Condyle, the ball-like termination of a joint moving in a socket, especially of the antenna.

Connate, soldered together.

Corbels, the flattened or excavated area at the apex of the tibia in which the tarsus is articulated.

Coriaceous, having a surface like that of leather.

Costa, a rounded ridge, broader than a *carina*.

Crenate, *crenulate*, furnished with a series of small, closely set, rounded indentations.

Declivity, the posterior slope of the elytra.

Declivous, gradually sloping.

Dehiscent, gaping apart (usually of the elytra).

Dentate, furnished with a row of teeth.

Denticulate, bearing a row of very small teeth.

Depressed, flattened as if by pressure from above.

Emarginate, notched.

Facies, the general aspect of a species, group, etc.

Ferruginous, rust-red.

Flavescent, yellowish.

Fovea, a rounded pit or impression, larger than a *punctur*

*** Names of the parts of the body explained in the diagrams in the Introduction are not included here.**

Geniculate, abruptly bent or elbowed (especially of the antennæ).

Glabrous, smooth, hair-less and without distinct sculpture.

Granulate, bearing very small rounded elevations (granules).

Humeral, relating to the shoulders of the elytra.

Intervals, the spaces between the striæ or rows of punctures on the elytra, or between punctures on the prothorax; on the elytra the intervals are numbered from the suture outwards, the first being that lying between the suture and the first stria; by some authors this interval is called the suture, and the next one the first interval.

Interstices, the spaces between granules and tubercles; by some authors this term is used in the sense here attributed to *intervals*.

Lobate, having the margin produced into a lobe, or rounded projection.

Moniliform, like a string of beads (applied to the joints of the antennæ).

Mucronate, terminating in a sharp point or spine (mucro); when applied to the tibiæ it indicates the presence of a spine at the *inner* apical angle, as opposed to *uncinate*.

Obsolete, almost effaced.

Ogival, shaped like a pointed or Gothic arch; applied to the portion of the first visible ventral segment lying between the hind coxæ (intercoxal process).

Pedunculate, having a neck-like or stalk-like supporting piece (peduncle).

Piceous, very dark reddish-brown to brownish-black.

Plicate, wrinkled into folds.

Porrect, projecting straight forwards (of the rostrum).

Process, a projecting part.

Pubescence, a clothing of soft hairs.

Punctate, set with impressed points or small rounded pits (punctures).

Punctato-striate, bearing lines of punctures in grooves.

Quadrate, square.

Rugose, having a rough irregular surface.

Scrobiculate, with small irregular furrows or pits.

Serrate, with teeth like a saw.

Seta, a stiff hair, often flattened or scale-like.

Shagreened, covered with minute raised dots, finer than *granules*.

Sinuate, with a broad curved indentation.

Squamose, clothed with scales.

Stria, an impressed line.

Striato-punctate, bearing regular rows of punctures.

Strigose, bearing fine irregular scratches.

Sub-, in composition signifies almost or slightly.

Sulcate, furrowed: *sulci* being broader and deeper than *striæ*.

Suture, a line along which two edges meet (especially of the elytra).

Testaceous, clear brownish-yellow, like the paler markings of tortoise-shell.

Transverse, broader than long.

Truncate, ending abruptly, as if cut straight across.

Tubercle, a small abrupt elevation, larger than a *granule*.

Uncinate, applied to the tibia when the outer apical angle is produced so as to form an inwardly curved hook.

Venter, the lower surface of the abdomen only.

Vermiculate, with irregular sinuous markings or striæ.

SYSTEMATIC INDEX.

Page
Suborder RHYNCHOPHORA. 1

Fam. CURCULIONIDÆ 4

Div. 1. ADELOGNATHI 28

Subfam. 1. *Brachyderinæ* 30

Group 1. Blosyrides 30

1. Blosyrus, *Schönh.* 31
    1. asellus, *Oliv.* 33
    2. oniscus, *Oliv.* 33
    3. herthus, *Hbst.* 35
    4. inæqualis, *Boh.* 35
    5. bengalensis, *Mshl.* 36
    6. ornatus, *Fst.* 37
    7. unisulcatus, *Mshl.* 38
2. Blosyrodes, *Jek.* 38
    1. quadrinodosus, *Jek.* .. 39
    2. variegatus, *Redt.* 40
    3. pubescens, *Mshl.* 41
    4. verrucosus, *Mshl.* 41
    5. tuberosus, *Mshl.* 42
    6. nodulosus, *Mshl.* 42
    7. nodulipennis, *Boh.* 43

Group 2. Naupactides 44

1. Cratopus, *Schönh.* 44
    1. adspersus, *Wtrh.* 45
    2. nicobarensis, *Mshl.* 46
    3. sinhalensis, *Mshl.* 46

Group 3. Cneorrhinides .. 47

1. Catapionus, *Schönh.* 47
    1. basalicus, *Boh.* 48
    2. semivittatus, *Mshl.* 49

Group 4. Cyphides 50

1. Dermatoxenus, *Mshl.* 50
    1. binodosus, *Mshl.* 51
    2. quadrisignatus, *Mshl.* .. 52
    3. indicus, *Mshl.* 53
    4. helleri, *Mshl.* 54
2. Dermatodes, *Schönh.* 55
    1. auratus, *Mshl.* 56
3. Eustalida, *Fst.* 57
    1. bomfordi, *Fst.* 57

Group 5. Tanymecides 58

1. Hadronotus, *Fst.* 62
    1. viridulus, *Fst.* 62
2. Scepticus, *Roeloffs* 63
    1. noxius, *Fst.* 64
    2. nubifer, *Fst.* 65
    3. cæsius, *Mshl.* 65
    4. kashmirensis, *Mshl.* 65
3. Acrocœlopus, *Mshl.* 66
    1. cretaceus, *Mshl.* 67
4. Tanymecus, *Schönh.* 68
    1. chloroleucus, *Wied.* .. 75
    2. sciurus, *Oliv.* 76
    3. cephalotes, *Fst.* 78
    4. chevrolati, *Fhs.* 79
    5. burmanus, *Mshl.* 80
    6. andrewesi, *Fst.* 80
    7. pertusiventris, *Fst.* 81
    8. hercules, *Desbr.* 82
    9. obscurus, *Mshl.* 83
    10. simplex, *Mshl.* 83
    11. xanthurus, *Chev.* 84
    12. mixtus, *Fst.* 84
    13. marginalis, *Gyl.* 85
    14. arenaceus, *Mshl.* 86
    15. lentus, *Fst.* 86
    16. piger, *Mshl.* 87
    17. deceptor, *Mshl.* 87
    18. lefroyi, *Mshl.* 88
    19. lacordairei, *Fst.* 89
    20. circumdatus, *Wied.* .. 90

Tanymecus (*con.*). Page
21. albomarginatus, *Gyl.* 91
22. propinquus, *Fst.* 92
23. innocuus, *Fst.* 93
24. versicolor, *Mshl.* 93
25. longulus, *Fhs.* 94
26. feæ, *Fst.* 95
27. mandibularis, *Mshl.* 96
28. princeps, *Fst.* 97
29. iracundus, *Fst.* 97
30. hispidus, *Mshl.* 98
31. hirticeps, *Mshl.* 98
32. indicus, *Fst.* 99
33. seclusus, *Fst.* 100
34. versutus, *Fst.* 100
35. tetricus, *Fst.* 101
36. parvus, *Desbr.* 101
37. curviscapus, *Mshl.* 102
38. modicus, *Mshl.* 103
39. konbiranus, *Mshl.* 104
40. agrestis, *Fst.* 104
41. lectus, *Mshl.* 105
42. verlorenii, *Voll.* 106
43. chloritis, *Fst.* 107
5. Phacephorus, *Schönh.* 107
1. argyrostomus, *Gyl.* 108
2. bimaculatus, *Mshl.* 109
6. Anemeroides, *Mshl.* 110
1. erinaceus, *Mshl.* 111
7. Atmetonychus, *Schönh.* 112
1. peregrinus, *Oliv.* 112
8. Anemerus, *Schönh.* 113
1. cerberus, *Fst.* 114
9. Hypomeces, *Schönh.* 115
1. squamosus, *Fabr.* 116
2. unicolor, *Web.* 117
10. Dereodus, *Schönh.* 118
1. denticollis, *Boh.* 120
2. pollinosus, *Redt.* 121
3. sparsus, *Boh.* 121
4. andamanensis, *Mshl.* 122
5. vigilans, *Mshl.* 123
6. mastos, *Hbst.* 124
7. pulverosus, *Mshl.* 125
11. Dyscheres, *Pasc.* 125
1. rugosus, *Pasc.* 126
12. Polycleis, *Schönh.* 127
1. parcus, *Boh.* 127
13. Astycus, *Schönh.* 128
1. chrysochlorus, *Wied.* 133
2. flavovittatus, *Pasc.* 134
3. adamsoni, *Mshl.* 135
4. neglectus, *Mshl.* 135
5. doriæ, *Fst.* 136
6. sylhetensis, *Mshl.* 137
7. submarginalis, *Fst.* 138
Page
8. gestroi, *Mshl.* 138
9. lateralis, *Fabr.* 139
10. oculatus, *Heller* 140
11. armatipes, *Mshl.* 141
12. aurovittatus, *Heller* 142
13. limbatus, *Mshl.* 142
14. griseus, *Desbr.* 144
15. glabrifrons, *Mshl.* 145
16. femoralis, *Fhs.* 145
17. apicatus, *Mshl.* 146
18. cinereus, *Mshl.* 147
19. æqualis, *Walk.* 147
20. cinnamomeus, *Mshl.* 148
21. lewisi, *Mshl.* 149
22. immunis, *Walk.* 150
23. canus, *Mshl.* 151
24. horni, *Mshl.* 152
14. Lepidospyris, *Mshl.* 153
1. cretacea, *Fst.* 153
2. demissa, *Mshl.* 154
3. angustula, *Mshl.* 155
15. Tylopholis, *Mshl.* 156
1. ballardi, *Mshl.* 157
2. obovata, *Mshl.* 158
16. Sympiezomias, *Fst.* 159
1. prasinus, *Boh.* 162
2. præteritus, *Mshl.* 163
3. frater, *Mshl.* 164
4. perroteti, *Boh.* 164
5. acutipennis, *Boh.* 165
6. hispidus, *Mshl.* 166
7. lividus, *Mshl.* 166
8. cretaceus, *Fst.* 167
9. decipiens, *Mshl.* 167
10. sulphuratus, *Mshl.* 167
11. anamalainus, *Mshl.* 168
12. serratipes, *Mshl.* 169
13. kraatzi, *Heller* 169
14. metallescens, *Mshl.* 170
15. similis, *Mshl.* 171
17. Leptomias, *Fst.* 172
1. spinifer, *Mshl.* 176
2. costatus, *Fst.* 176
3. setulosus, *Mshl.* 177
4. angustatus, *Redt.* 177
5. lituratus, *Redt.* 179
6. bituberculatus, *Mshl.* 179
7. curtus, *Mshl.* 180
8. porcellus, *Mshl.* 180
9. scrobicollis, *Mshl.* 181
10. elongatulus, *Mshl.* 181
11. jekeli, *Fst.* 181
12. stoliczkæ, *Fst.* 182
13. verrucicollis, *Fst.* 183
14. bipustulatus, *Fst.* 184

Page
15. stultus, *Fst.* 184
16. invidus, *Fst.* 185
17. sabulosus, *Fst.* 186
18. cylindricus, *Mshl.* 186
19. prætermissus, *Mshl.* .. 186
20. sulcicollis, *Mshl.* 187
21. persimilis, *Mshl.* 187
22. bimaculatus, *Fst.* 188
23. audax, *Fst.* 188
24. waltoni, *Mshl.* 189
25. longulus, *Fst* 189
26. curvipes, *Mshl.* 190
18. Xylinophorus, *Fst.* 191
1. peregrinus, *Fst.* 192
2. prodromus, *Fst.* 192
3. penicillatus, *Mshl.* 193
4. strigifrons, *Fst.* 194
19. Hyperomias, *Mshl.* 194
1. ænescens, *Mshl.* 195
20. Geotragus, *Schönh.* 196
1. himalayanus, *Boh.* 197
2. bituberosus, *Desbr.* 198
3. subfasciatus, *Desbr.* 199
4. fissicollis, *Mshl.* 199
5. ellipticus, *Fst.* 200
21. ✓Pachynotus, *Redt.* 201
1. globulicollis, *Redt.* 201
22. Achlænomus, *Wtrh.* 202
1. ebeninus, *Wtrh.* 202
2. montarum, *Mshl.* 203

Subfam. 2. *Otiorrhynchinæ* 204

Group 1. Episomides 204

1. Parapionus, *Mshl.* 205
1. varicolor, *Mshl.* 206
✓2. Episomus, *Schönh.* 207
1. bicuspis, *Mshl.* 215
2. guttatus, *Boh.* 217
3. montanus, *Guér.* 219
4. arcuatus, *Mshl.* 219
5. dejeani, *Fst.* 220
6. irregularis, *Mshl.* 221
7. figuratus, *Karsch* 221
8. raucus, *Fst.* 222
9. nilgirinus, *Heller* 222
10. lacerta, *Fabr.* 223
11. connexus, *Mshl.* 225
12. manipurensis, *Mshl.* .. 225
13. inermicollis, *Mshl.* 226
14. appendiculatus, *Fst.* .. 226
15. versutus, *Fst.* 227
16. quatuornotatus, *Desbr.* . 228
17. andrewesi, *Mshl.* 229
18. frenatus, *Mshl.* 230
19. obuncus, *Mshl.* 231
20. fabriciusi, *Fst.* 231
21. avuncularius, *Mshl.* 232
22. nebulosus, *Mshl.* 232
23. repandus, *Fst.* 233
24. dohertyi, *Mshl.* 233
25. decipiens, *Mshl.* 234
26. nigropustulatus, *Fst.* .. 235
27. sagax, *Fst.* 235
28. figulus, *Boh.* 236
29. quadrimaculatus, *Mshl.* . 237
30. profanus, *Fst.* 237
31. uniformis, *Pasc.* 238
32. pyriformis, *Mshl.* 239
33. arduus, *Mshl.* 239
34. obstrusus, *Mshl.* 240
35. brevipennis, *Fst.* 241
36. humeralis, *Chev.* 241
37. pudibundus, *Fst.* 242
38. limbaticollis, *Mshl.* 243
39. oblongus, *Mshl.* 243
40. arrogans, *Boh.* 244
41. subnitens, *Mshl.* 245
42. sennæ, *Fst.* 245
43. obliquus, *Mshl.* 246
44. sulcicollis, *Pasc.* 247
3. Lachnotarsus, *Mshl.* 248
1. stevensi, *Mshl.* 249

Group 2. Nothognathides .. 250

1. Nothognathus, *Mshl.* 250
1. schoutedeni, *Mshl.* 251
2. varius, *Mshl.* 252

Group 3. Otiorrhynchides.. 252

1. Cyrtozenia, *Pasc.* 253
1. dispar, *Pasc.* 253
2. cognata, *Mshl.* 255
2. Otiorrhynchus, *Germ.* 255
1. amœnus, *Fst.* 256
2. peregrinus, *Mshl.* 257
3. rusticus, *Stierl.* 257
4. striolaticeps, *Mshl.* 258
3. Ptochus, *Schönh.* 259
1. horridulus, *Fst.* 262
2. pyriformis, *Mshl.* 263
3. strabo, *Mshl.* 263
4. imbellis, *Mshl.* 264
5. ovulum, *Fst.* 265
6. afflictus, *Fst.* 265
7. concinnus, *Mshl.* 266

Ptochus (*con.*). Page
8. lapsus, *Mshl.* 267
9. brevicollis, *Mshl.* 267
10. apicatus, *Mshl.* 268
11. adjunctus, *Mshl.* 269
12. assamensis, *Mshl.* 269
13. pusio, *Mshl.* 269
14. napæus, *Mshl.* 270
15. limbatus, *Mshl.* 270
16. noxius, *Fst.* 271
17. brachyderoides, *Desbr.* 272
18. percussus, *Fst.* 272
19. planoculis, *Mshl.* 273
20. nodulosus, *Fst.* 273
21. crinitus, *Redt.* 274
22. imbricatis, *Mots.* 275

Group 4. Trachyphlœides.. 275

1. Trachyphlœosoma, *Woll.* 275
1. alternatum, *Mshl.* 276
2. Trachyodes, *Mshl.* 277
1. horrescens, *Mshl.* 277

Group 5. Phyllobiides 278

1. Catorygma, *Mshl.* 279
1. curvipes, *Mshl.* 280
2. Amphorygma, *Mshl.* 281
1. nilgirensis, *Mshl.* 281
2. ceylonensis, *Mshl.* 282
3. Epicalus, *Mots.* 282
1. virgatus, *Mots.* 283
4. Drepanoderes, *Wtrh.* 284
1. viridifasciatus, *Wtrh.* 285
5. Emperorrhinus, *Mshl.* 286
1. defoliator, *Mshl.* 286
6. Brachycaulus, *Mshl.* 287
1. posticalis, *Mshl.* 288
2. personatus, *Mshl.* 289
7. Stelorrhinus, *Mshl.* 289
1. carinirostris, *Mshl.* 290
✓8. Myllocerus, *Schönh.* 291
1. viridanus, *Fabr.* 301
2. pætus, *Mshl.* 303
3. evasus, *Mshl.* 304
4. delicatulus, *Boh.* 304
5. anamalainus, *Mshl.* 305
6. subglaber, *Fst.* 305
7. suspiciens, *Mshl.* 306
8. rusticus, *Fst.* 306
9. pilifer, *Fst.* 307
10. kashmirensis, *Mshl.* 308
11. nigrosuturalis, *Mshl.* 308
12. viridulus, *Mshl.* 309

Page
13. sericeus, *Fst.* 309
14. planoculis, *Mshl.* 309
15. catechu, *Mshl.* 310
16. pumilus, *Mshl.* 311
17. ignavus, *Mshl.* 312
18. setulifer, *Desbr.* 312
19. consocius, *Mshl.* 313
20. boviei, *Mshl.* 313
21. pretiosus, *Fst.* 314
22. simplex, *Fst.* 314
23. desquamatus, *Mshl.* 315
24. zeylanicus, *Mshl.* 315
25. hispidus, *Mshl.* 316
26. angulatipes, *Mshl.* 316
27. lineatocollis, *Boh.* 317
28. discoideus, *Oliv.* 318
29. postfasciatus, *Mshl.* 319
30. dorsatus, *Fabr.* 320
31. tenuicornis, *Fst.* 321
32. conspersus, *Mshl.* 321
33. pauper, *Fst.* 322
34. gracilis, *Mshl.* 323
35. smaragdinus, *Mshl.* 323
36. procerus, *Fst.* 323
37. brachycollis, *Fst.* 324
38. madurensis, *Mshl.* 325
39. minutus, *Fst.* 325
40. luctuosus, *Desbr.* 326
41. tenuiclavis, *Mshl.* 327
42. fabricii, *Guér.* 328
43. lateralis, *Chev.* 329
✓44. lætivirens, *Mshl.* 330
45. tusicollis, *Mshl.* 330
46. impressicollis, *Mshl.* 331
47. echinarius, *Mshl.* 332
48. manipurensis, *Mshl.* 333
49. blandus, *Fst.* 333
50. ineptus, *Mshl.* 334
51. suavis, *Fst.* 335
52. necopinus, *Mshl.* 335
53. sabulosus, *Mshl.* 336
54. transmarinus, *Hbst.* 337
55. pubescens, *Fst.* 338
56. cardoni, *Mshl.* 339
57. subglaucus, *Mshl.* 339
58. spectator, *Mshl.* 340
59. lefroyi, *Mshl.* 340
60. nodicollis, *Mshl.* 341
61. severini, *Mshl.* 342
62. impallescens, *Mshl.* 342
63. improvidus, *Mshl.* 343
64. curvicornis, *Fabr.* 343
65. roscidus, *Mshl.* 344
66. subfasciatus, *Guér.* 345
67. andrewesi, *Mshl.* 346

Page
68. dentifer, *Fabr.* 347
✓69. discolor, *Boh.* 348
70. undatus, *Mshl.* 350
71. 11-pustulatus, *Fst.* 350
9. Hyperstylus, *Roel.* 352
1. chloris, *Mshl.* 353
2. cinereus, *Mshl.* 352
3. plebeius, *Mshl.* 354
4. hispidulus, *Mshl.* 354

Page
10. Arrhines, *Schh.* 355
1. languidus, *Gyl.* 356
2. vitticollis, *Mshl.* 357
3. hirtus, *Fst.* 357
4. tutus, *Fst.* 358
5. lanugineus, *Fst.* 359
11. Holorrhynchus, *Mshl.* 359
1. integrirostris, *Mshl.* 360

INTRODUCTION.

Suborder *RHYNCHOPHORA*.

THE CURCULIONIDÆ, or Weevils, belong to a very well-marked division of the Coleoptera, which is generally treated as a suborder under the name of Rhynchophora. But although the members of this assemblage can be readily recognised by their general facies, no single structural feature has yet been discovered which characterises all the species to the exclusion of other Coleoptera.

As first pointed out by J. L. Leconte ('American Naturalist,' 1874, p. 385; Proc. American Phil. Soc. xv, 1876, p. 1), the most representative characteristics of the suborder are the consolidation of the sclerites on the lower surface of the head and on the prosternum; of these the cephalic structure is the more important.

In normal Coleoptera there will be observed on the posterior portion of the lower surface of the head two longitudinal sutures, either straight or curved, and varying in their direction and approximation. These are known as the gular sutures, and the piece lying between them is the gula. In the Rhynchophora, with a few exceptions, the gula has entirely disappeared and there is only a single median suture, which itself is sometimes evanescent or even absent (fig. 2). Leconte stated that this coalescence of the gular sutures did not occur in any species outside of the suborder, but this has been contested by H. J. Kolbe (Arch. Naturg. 1901, Beiheft, p. 95), who says that in certain genera of the PASSANDRINÆ (CUCUJIDÆ) and TROGOSITIDÆ the gular structure is similar to that in the Rhynchophora. I have been unable to confirm the latter statement, for in all the genera which I have examined of the groups specified two gular sutures are undoubtedly present.

For the present, therefore, we may accept the disappearance of the gula as a character peculiar to the Rhynchophora. But Dr. C. J. Gahan has pointed out that there are a few genera in the group for which it does not hold good ('Entomologist,' xliv, 1911, p. 217); these are *Rhinomacer* and *Oxycorynus* (CURCULIONIDÆ), and some SCOLYTIDÆ, such as *Crossotarsus*. With regard to the last-named instance, Dr. Gahan informs me that he has since ascertained that when the two gular sutures are present in the PLATYPODINÆ, the character is a sexual one, the sutures uniting in the female, while in the male they are continued independently to the hind margin of the head.

In the case of the prosternum, the points which are specially characteristic of the Rhynchophora are the disappearance of the two sutures that separate the prosternum (the central piece before the front coxæ) from the side-pieces or pleuræ, and the fusion of the epimera in the middle line behind the coxæ. To both of these characters there are exceptions. The prosternal sutures are present in the RHINOMACERINÆ, and traces of them near the coxæ can be observed in many genera of CURCULIONIDÆ (fig. 7). As regards the fusion of the epimera, the only apparent exceptions in the suborder known to me are the African Curculionid genera *Hoplitotrachelus*, Schh., and *Byrsops*, Schh., which comprise the subfamily BYRSOPINÆ. In these insects, if examined externally, the epimera appear to be separated by an appreciable interval; but if the prothorax be removed and examined internally, it will be found that the posterior portion is fused into a solid ring without any trace of a suture.

In the other suborders of Coleoptera the prosternal epimera are separated, with a few exceptions, such as the MEGALOPODIDÆ among the Phytophaga, *Cossyphus* and *Endostomus* (TENEBRIONIDÆ), certain LAGRIIDÆ, and the genus *Nematidium* among the CUCUJIDÆ; but in none of these insects are the pieces fused together as in the Rhynchophora.

Various attempts have been made to subdivide the Rhynchophora into a number of families, the new families proposed having been for the most part extracted from the CURCULIONIDÆ. But those authors who have gone furthest in splitting up this family have made no special study of these insects as a whole, and when the attempt is made to apply their classifications to faunas with which they were not well acquainted, the results have proved far from satisfactory. In the present state of our knowledge, therefore, it seems preferable to follow Lacordaire, David Sharp and Ganglbauer in recognising only the four main families, ANTHRIBIDÆ, CURCULIONIDÆ, SCOLYTIDÆ* and BRENTHIDÆ, together with the two small and highly aberrant groups, PROTERRHINIDÆ and AGLYCYDERIDÆ, which do not occur within our limits.

Owing to the presence of various convergent forms, it is not easy to lay down hard and fast lines of demarcation between several of these families, but the following key will perhaps assist in their discrimination.

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* There does not appear to be any justification for the use of the name IPIDÆ for this family, as *Scolytus*, Müll., is a valid genus.

Key to the Families.

1 (2) Tarsi apparently 3-jointed, joint 2 bilobed .... [AGLYCYDERIDÆ and PROTERHINIDÆ].

2 (1) Tarsi apparently 4-jointed, the minute additional joint (4th) very rarely well-developed so that the tarsi are 5-jointed (*Dryophthorus*, COSSONINÆ), joint 3 more or less dilated or bilobed.

3 (4) Palpi normal, flexible; labrum distinct; pronotum with the lateral margins carinate .... ANTHRIBIDÆ.

4 (3) Palpi very short and rigid[*] (fig. 2); labrum absent or concealed[†]; the margins of the pronotum not carinate[‡].

5 (8) Head produced into a rostrum, at least in the female[§]; tibiæ never denticulate externally.

6 (7) Antennæ without a terminal club,[‖] never geniculate; the general form invariably narrow and elongate; metasternum at least as long as broad; segment 2 of the venter much longer than 3 and 4, and fused with 1 in the middle[¶] .... BRENTHIDÆ.

7 (6) Antennæ with a terminal club,[**] the joints of which, with comparatively few exceptions, are compact; antennæ usually geniculate, but often straight; metasternum almost always broader than long; those forms in which the metasternum is long and the antennæ straight have segment 2 of the venter not longer than 3 and 4, and separated from 1 by a distinct suture .... CURCULIONIDÆ.

8 (5) Head never produced into a rostrum; tibiæ denticulate externally ...... SCOLYTIDÆ.

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[*] Except in RHINOMACERINÆ (CURCULIONIDÆ), in which also the labrum is distinct. These insects differ from the ANTHRIBIDÆ in having two gular sutures, distinct prosternal sutures, the front coxæ elongate and the median coxal cavities open.

[†] Except in RHINOMACERINÆ and some PLATYPODINÆ.

[‡] Except in *Oxycorynus* and *Pterocolus* (CURCULIONIDÆ), and in *Scolytus*.

[§] Except in *Sebasius* and *Aprostoma* (BRENTHIDÆ), the latter having the last joint of the maxillary palpi hatchet-shaped.

[‖] Except in most TAPHRODERINÆ and a few TRACHELIZINÆ, but in these the club is always formed of three quite separated joints.

[¶] Except in *Nothogaster*, Lac.

[**] Except in BELINÆ.

Family CURCULIONIDÆ.

The real foundations of our knowledge of this multitudinous family of beetles were first laid in the monumental work produced by the four eminent Swedish entomologists, Schönherr, Boheman, Gyllenhal and Fåhræus ('Genera et Species Curculionidum', vols. i–viii, 1833–45), in which 603 genera and some 6550 species were described, only between 600 and 700 species having been known previously. The only subsequent attempt to survey the CURCULIONIDÆ of the world as a whole is contained in Lacordaire's 'Genera des Coléoptères' (vols. vi & vii, 1863 & 1866). In this work he recognised 834 genera, which were divided into 82 "tribes" or subfamilies. His classification was based on thoroughly sound lines and was an immense advance on Schönherr's superficial arrangement of the family. It is true that many modifications in his system have been rendered necessary as a result of the enormous increase in the number of described genera and species during the last fifty years, but nevertheless Lacordaire's classification, on account of its comprehensive character, remains to-day the standard one for the student who has to deal with the weevils of any fauna other than those of Europe or North America.

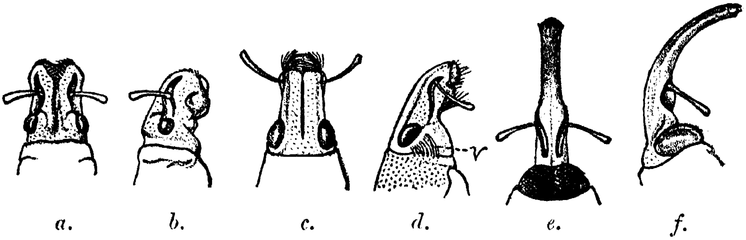

Fig. 1.—Heads of: *a*, *b*, *Episomus subnitens*, Mshl., dorsal and lateral views, showing the subdorsal scrobe directed towards the eye, characteristic of the Otiorrhynchinæ; *c*, *d*, *Astycus chrysochlorus*, Wied., dorsal and lateral views, showing the linear, lateral and downwardly curved scrobe, characteristic of the Brachyderinæ; *e*, *f*, *Sipalus hypocrita*, Boh., ventral and lateral views, with the scrobe running beneath the rostrum; *v*, vibrissæ.

When Gemminger and von Harold published their Catalogue of the Curculionidæ in 1871, the number of described species known to them amounted to 10,150, and there can be little doubt that the number to-day would run to well over 20,000. A thorough revision of this large assemblage of genera, already much overdue, is essential for a true appreciation of their interrelationships, but such a task was quite impossible in connexion with the preparation of the present volume, and the alternative

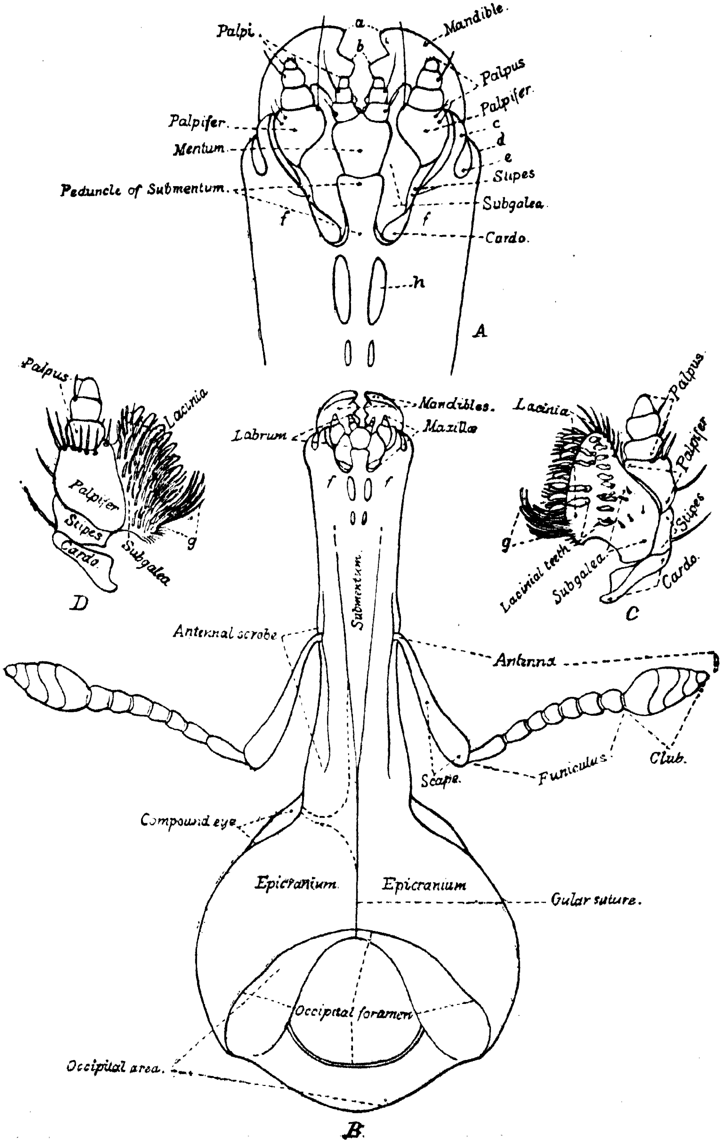

Fig. 2.—Head and mouth-parts of *Pissodes* (Hylobiinæ); A, ventral aspect of apex of rostrum; B, ventral aspect of entire head; C. interno-lateral aspect of maxilla; D, externo-lateral aspect of maxilla; *a*, apical tooth; *b*, subapical tooth; *c*, inner lobe of gena; *d*, gena; *e*, mandibular socket; *f*, gena; *g*, lacinial bristles; *h*, foveæ on submentum. (After Hopkins.)

adopted has been to take Lacordaire's arrangement as a working basis, making only such alterations as are necessary for the inclusion of the numerous Indian species which were unknown to him.

Structure of the Imago.

Rostrum.—The most striking characteristic of the CURCULIONIDÆ is the prolongation of the head in front of the eyes, forming a rostrum or beak (fig. 2) which bears the antennæ; the mouth being situated at its extreme apex. This structure varies immensely in its shape and development; at one end of the series it is extremely short, and almost as broad and deep as the head in certain terrestrial Australian species (*Amycterus*) and in a few Scolytid-like forms among the COSSONINÆ, while in *Balaninus* it is very slender and may be even longer than the whole body; and every intergrade between these extremes may be found. Along each side of the rostrum there is always a well-marked hollow or furrow, the scrobe, in which the antenna is placed, the furrow being used for the reception of the elongate first joint, or scape, when in a position of rest. The shape and position of the scrobe afford useful taxonomic characters (fig. 1).

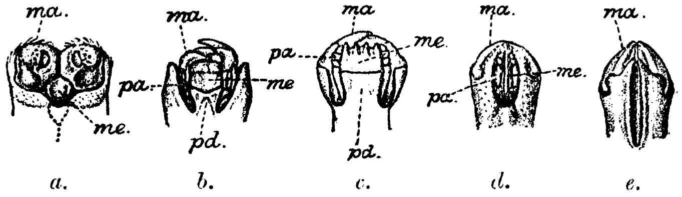

Fig. 3.—Mouth-parts of: *a*, *Episomus subnitens*, Mshl.; *b*, *Dicranotropis aschabadensis*, Fst.; *c*, *Apoderus cygneus*, F.; *d*, *Alcides pectoralis*, Boh.; *e*, *Sipalus hypocrita*, Boh.; *ma*, mandible; *me*, mentum; *pa*, maxillary palpus; *pd*, peduncle of submentum.

Mouth-parts (figs. 2–5).—The mouth-parts are contained in the terminal aperture, or buccal cavity, and in the species with a slender rostrum they are naturally much reduced in size. The most noticeable feature is the great reduction of the palpi, which are invariably very short and rigid (except in the RHINOMACERINÆ), and often entirely concealed. In various groups the mentum exhibits striking differences in its relation to the other parts of the mouth (fig. 3), and this was utilised by Lacordaire in his primary division of the family into CURCULIONIDÆ ADELOGNATHI and CURCULIONIDÆ PHANEROGNATHI. In the ADELOGNATHI (figs. 3, *a*, and 4, *a*, *c*) the large, obtuse and pincer-like mandibles occupy the greater part of the buccal cavity and the small space left behind them is completely or almost completely filled by the mentum. In the completely adelognathous genera the maxillæ and their palpi are entirely hidden, and there is no supporting peduncle projecting from the submentum. But in some genera there is a very short and broad peduncle, and in such cases the base of the maxilla is visible on each side; the maxillary palpi, however, are always concealed when the mouth is closed, though an insect will sometimes die with its palpi exserted beyond the front margin of the mentum.

In the PHANEROGNATHI the mentum assumes much more varied shapes (fig. 3, *b*, *c*, *d*) and is nearly always supported on a marked process emitted by the submentum. In these insects the maxillary palpi are clearly visible, lying on each side of the mentum, and the mandibles are much more slender and pointed; but this does not apply to the SIPALINÆ, in which the condition of the mouth-parts is quite abnormal (fig. 3, *e*), the peduncle having apparently become fused with the edges of the emargination of the submentum in which it normally lies, so that the buccal cavity is reduced to a transverse slit at the apex of the rostrum, only the mandibles being visible. An allied Eastern genus, *Cryptoderma* (*Oxyrhynchus*), presents what appears to be a transitional condition in this direction.

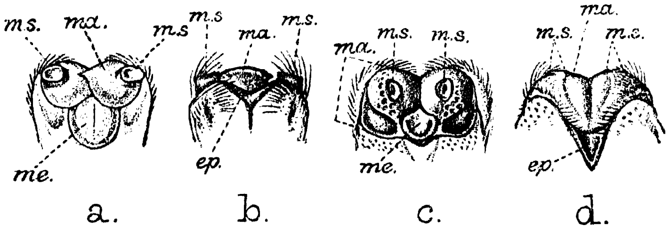

Fig. 4.—Apex of rostrum of: *a*, *b*, *Astycus chrysochlorus*, Wied., ventral and dorsal views; *c*, *d*, *Episomus subnitens*, Mshl., ventral and dorsal views; *ma*, mandible; *m.s.*, mandibular scar; *me*, mentum; *ep*, epistome.

The maxillæ are always slender in those species in which they are hidden by the mentum, but in the other section they are often a good deal stouter, and especially in an Australian subfamily, the AMYCTERINÆ, in which they are broad and fused to the sides of the mentum. They have normally only a single lobe, and even this is evanescent in the species with a very slender rostrum. The place of the missing outer lobe is occupied by the palpus.

Among the ADELOGNATHI the mandibles present a character the significance of which was first explained by Lacordaire (Gen. Coleop. vi, p. 5), and was subsequently shown by Leconte to be of considerable taxonomic importance. If the mandibles of one of the BRACHYDERINÆ or OTIORRHYNCHINÆ be examined from in front, there will be observed on each a more or less rounded or oval area, which is sometimes merely flattened, but is more often slightly hollowed (fig. 4). The edge of this area is nearly always slightly raised above the adjoining surface of the mandible, but in many **Tanymecides** it is markedly prominent and can be readily seen when the end of the rostrum is viewed from above (fig. 4, *b*). This structure, which is known as the mandibular scar, serves as a support for a temporary false mandible (fig. 5), or mandibular appendage, which in the vast majority of species normally breaks off soon after the emergence of the adult, though persisting in a few exceptional individuals; there are, however, a few genera in which it appears to be retained permanently, namely, in both sexes of the Palæarctic *Psalidium*, and in the males only of the Australian *Prostomus*, while the same is also possibly true of a new Indian genus, *Nothognathus* (fig. 77).

The false mandibles vary considerably in their form, but they are of no value for purposes of classification, often differing markedly in closely allied species; they are usually less developed and more readily deciduous in the females, and are a conspicuous feature of the rostrum in the pupal stage.

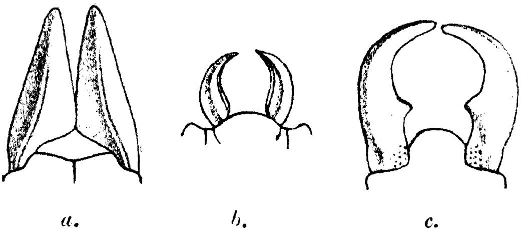

Fig. 5.—Mandibular appendages of: *a*, *Episomus figuratus*, Karsch; *b*, *Myllocerus discolor*, Boh.; *c*, *Astycus lateralis*, F.

It is generally assumed that the newly emerged insect utilises these organs for breaking its way out of the cocoon or through the soil beneath which it has pupated; and this conclusion finds support in the fact that the appendages are present only in those species that have obtuse mandibles, the edges of which are deep vertically and meet like a pair of pincers, being more suitable for crushing than for cutting. M. P. Lesne has recorded an observation in this connection made by himself on newly emerged examples of a European species, *Exomias pellucidus*, Boh. (Bull. Soc. Ent. France, 1899, p. 143):—"Propped up in its subterranean chamber, the weevil opens its mandibles and seizes a particle of earth between the long appendages; it then inclines its head beneath its thorax and deposits the particle between its legs," this operation being continued so that it gradually works its way up to the surface.

In the majority of the **Phanerognathi** the mandibles are strongly

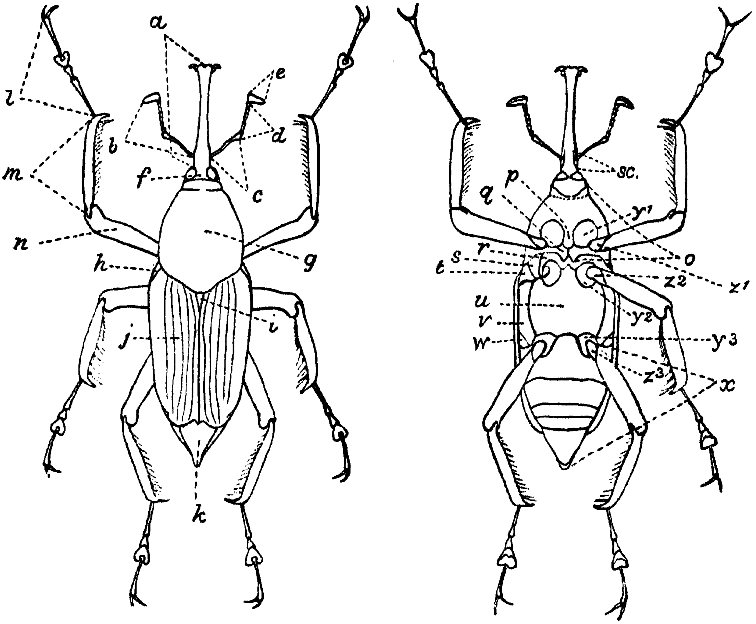

Fig. 6.—*Cyrtotrachelus dux*, Boh., ♀, dorsal and ventral aspects.

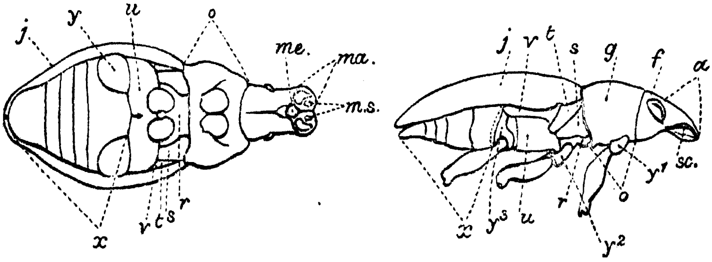

Fig. 7.—*Episomus subnitens*, Mshl. (ventral aspect) and *Astycus chrysochlorus*, Wied. (lateral aspect).

a, rostrum; *b*, antenna; *c*, scape; *d*, funicle; *e*, club; *f*, forehead; *g*, prothorax (pronotum); *h*, dorsal angle of mesosternal epimeron; *i*, scutellum; *j*, elytron; *k*, pygidium; *l*, tarsus; *m*, tibia; *ma.*, mandible; *me.*, mentum; *m.s.*, mandibular scar; *n*, femur; *o*, prosternum; *p*, intercoxal process of prosternum; *q*, prosternal epimeron; *r*, mesosternum; *s*, mesosternal episternum; *sc.*, scape; *t*, mesosternal epimeron; *u*, metasternum; *v*, metasternal episternum; *w*, metasternal epimeron; *x*, venter; *y*, coxæ.

bidentate internally (fig. 2), but in the species with a slender rostrum they are prominent, flattened, triangular and pointed at the apex. In the RHYNCHITINÆ they are toothed on the external edge, while in several large CALANDRINÆ the outer surface is produced into a long recurved process (fig. 6), which at first sight might be thought to belong to the gena. The BALANININÆ present a very remarkable anomaly in the structure of the mandibles, for the condyles are dorsal in position, instead of at the sides, so that the mandibles work vertically side by side, instead of being horizontal and opposed.

Antennæ.—The antennæ may be situated anywhere between the base and the apex of the rostrum; they are generally inserted at the side, but if on the upper surface, they will always be found at the apex (commonly so in the ADELOGNATHI), whereas in the comparatively few cases in which they are placed beneath, they are always well behind the middle.

There are two well-marked types, namely, those in which the first joint is very long (being then known as the scape), so that the antennæ are elbowed, or geniculate; and those in which this joint is short, the whole organ being straight or gradually curved. The use of this character for one of the main divisions of the family, which was originally suggested by Schönherr and recently adopted by Kolbe (Arch. Naturges. 1901, Beiheft, p. 143), is very unsatisfactory, as it leads to an obviously unnatural grouping of the genera.

Lacordaire considered that the normal number of joints in the antenna is 12; but, as he himself admitted, one would be quite justified in regarding the very small terminal joint, which is usually indistinct and very often indistinguishable, as being merely a false joint, like that which so often occurs among the CHRYSOMELIDÆ, CERAMBYCIDÆ, ELATERIDÆ, etc. The antenna is usually treated as consisting of three portions:—(1) the scape, consisting only of the basal joint; (2) the funicle, which normally comprises 7 joints, the number varying from 4 to 8; and (3) a terminal club, composed normally of 3 or 4 joints.

The scape varies greatly in length, but even in the species with straight antennæ it is, with very rare exceptions, longer than the first joint of the funicle. In the great majority of ADELOGNATHI the scape reaches beyond the front margin of the eye, whereas this is rarely the case in the species with a long rostrum. The most notable exception to the latter rule is to be found in an Australasian group of CRYPTORHYNCHINÆ, the MECISTOSTYLINI; in the males of a *Mecomastyx* from New Caledonia the scape is at least as long as the whole insect and may be four times as long.

In by far the greatest number of species the funicle is composed of 7 joints, but those in which there are only 6 are fairly numerous, even if we exclude the forms in which the 7th joint is partly annexed to the club, nearly all of them occurring in the PHANEROGNATHI.* The forms in which the funicle is 5-jointed are much less numerous, namely, *Mecinus* (ERIRRHININÆ), the CIONINÆ, the GYMNETRINÆ, and the PENTARTHRIDES (COSSONINÆ). An 8-jointed funicle is still less common, having been recorded only in the following genera :—*Anchonus*, *Cylas*, *Myrmacicelus* and *Pterocolus;* Lacordaire adds also the African genera *Ctenomerus* and *Amphibolocorynus*, but it seems to be more reasonable to regard these insects as having 6 and 5 joints in the funicle respectively, with a loosely 3-jointed club. The only genus which exhibits a 4-jointed funicle is the widely distributed *Dryophthorus* (COSSONINÆ), which is also remarkable in having 5-jointed tarsi. In certain genera of CLEONINÆ it is difficult to state precisely the number of joints in the funicle, as these are so regularly widened towards the club that it is not easy to say where the latter begins. The same applies to the BELINÆ, in which there is no club whatever.

The joints of the antennal club are normally very closely fitted together so as to form a compact knob, but in certain subfamilies, such as the ATTELABINÆ, the articulations are well marked, and this is even more pronounced in the RHYNCHITINÆ, while in a few genera, such as the two mentioned above, *Ctenomerus* (ERIRRHININÆ) and *Amphibolocorynus* (CIONINÆ), the joints are quite as free as those of the Brenthid club. There is also often a marked tendency in the opposite direction, for in the BRACHYCERINÆ, CALANDRINÆ, SIPALINÆ, etc., only the first joint is fully developed, the others being more or less telescoped into it. In *Cylas* and in several genera of African ITHYPORINÆ the club is solid and without any trace of articulations. Among the CALANDRINÆ it frequently assumes a hatchet-shaped form, and occasionally (*Cercidocerus*) differs markedly in the two sexes. In some of the long-necked species of *Apoderus*, also, the apical joint of the male has a curved appendage which is not present in the female.

Head.—The head is globular and set well into the prothoracic cavity, but in several groups, principally those having straight antennæ, such as APIONINÆ, CYLADINÆ, RHYNCHITINÆ, BELINÆ, etc., it is prolonged into a short neck behind the eyes, while in *Apoderus* it is extravagantly lengthened in the males of some species and there is a deep constriction near its base in both sexes, as in the BRENTHIDÆ.

There is considerable diversity in the shape and position of the eyes. In the ADELOGNATHI they are, on the whole, relatively small, being always shorter vertically than the depth of the rostrum (fig. 1, *b*, *d*), while in the PHANEROGNATHI this is very rarely the case. In the former section there are two fairly well-marked types of eyes, which are correlated with the development of the postocular lobe on the front margin of the prothorax. When the lobe is absent, the eyes are rounded or short oval and usually convex, sometimes being very prominent, as in the African *Podionops* and *Ectatopsides* and in some Indian species of *Dereodus*. When the lobe is present, it frequently covers a portion of the eye when the head is retracted, so that in these cases the eye is more or less flattened and it is apt to be longer vertically and somewhat pointed below. In some TANYRRHYNCHINÆ the eyes assume a very remarkable position, being placed close together on the upper surface of the base of the rostrum. In certain groups of which the species run about fairly actively on tree-trunks and leaves, such as the ZYGOPINÆ, the eyes meet or are closely approximated on the upper surface of the head, of which they occupy the greater part; on the other hand, in the CALANDRINÆ and some allied groups the eyes nearly meet on the lower surface and are widely separated above (fig. 1, *e*), while in some *Rhina* (SIPALINÆ) they occupy the whole of the front part of the head, meeting above and below. I know of only one exception to the rule that the eyes are bare, namely, a recently described South African genus, *Anchonocranus* (ERIRRHININÆ), which has numerous erect scale-like setæ between the coarse facets. A number of genera are known in which the eyes are much reduced, or even entirely absent, especially among the COSSONINÆ.

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* The following are the genera and groups in which I have noted a 6-jointed funicle :—*Microcerus* and *Episus* (BRACHYCERINÆ), *Dinomorphus*, some RHYTIRRHININÆ, the AMYCTERINÆ, some RHYPAROSOMINÆ, the LITHININÆ, a few MOLYTINÆ, *Limobius* (HYPERINÆ), *Aterpus* (ATERPINÆ), some ERIRRHININÆ, the PETALOCHILINÆ, *Lagenoderus* (ATTELABINÆ), some ANTHONOMINÆ, some *Rhynchænus* (*Orchestes*), *Endæus* (TYCHIINÆ), *Alcides*, *Nerthops*, *Pylarus* (MENEMACHINÆ), some TYLODIDES, the MECOPIDES, some CEUTHORRHYNCHINÆ, the CALANDRINÆ, the SIPALINÆ, the STROMBOCERINÆ, *Cryptoderma* (CRYPTODERMATINÆ), and *Raymondia* and *Hexarthrum* (COSSONINÆ).

Prothorax.—Reference has already been made to the general consolidation of the sclerites of the prothorax, and another outstanding feature of this segment is the absence of the sharp carina separating the dorsal from the lateral surfaces, which is so common in the Coleoptera. The only exceptions are to be found in two American genera, *Oxycorynus* and *Pterocolus*, in which this carina is well defined. The presence or absence of a lobe on the anterior margin of the prothorax just below the eye affords a useful systematic character, as also does the relative position of the front coxal cavities. Lacordaire used the separation of the front coxæ as the essential character for a very large group of PHANEROGNATHI, but he himself recognised that this was the weakest spot in his whole system, and the exceptions are so numerous that his arrangement in that section will certainly need radical modification. But considerable taxonomic value attaches to the various forms of the deep pectoral channel which is possessed by the CRYPTORRHYNCHINÆ for the reception of the rostrum. This may be confined to the prosternum, and on the other hand it may extend as far as the metasternum, while in one South American genus (*Panolcus*) it actually reaches the end of the abdomen.

Elytra.—The elytra are always strongly chitinised and never remarkably shortened, though in many groups the pygidium is freely exposed. In the vast majority of species they bear impressed lines, or striæ, containing rows of punctures, the normal number of these striæ being 10, of which the outer or tenth * is often visible only in the basal half. The presence of a true shoulder often affords a useful distinction, and it is very constantly correlated with the possession of fully developed wings. Leconte has used for some of his larger subdivisions of the family a character which has been quite neglected by other authors, namely, the presence or absence of a strong carina near the outer margin of the elytra on their under surface, which evidently engages with the concealed chitinised margin of the ventral segments, thus giving much greater rigidity to the body. As he has employed it, the character is subject to exceptions which render it distinctly unsatisfactory, but there can be little doubt that it will furnish some useful distinctions when it has been examined in a larger number of genera. In many wingless species the elytra are fused together along the suture, and in some cases (BRACHYCERINÆ) they are more or less soldered laterally to the sides of the sternum.

Wings.—The venation of the hind wings in the CURCULIONIDÆ has not been sufficiently studied to enable it to be utilised for purposes of classification, though it will probably yield interesting results when more fully investigated. The mere presence or absence of wings is a character of unequal reliability. In various genera there are both winged and wingless species, but, on the other hand, the absence of wings is frequently correlated with terrestrial habits, which are often characteristic of definite groups of genera. Some authors have divided the ADELOGNATHI into two primary sections on this character, but the result is certainly unsatisfactory, as two heterogeneous assemblages are formed, while obviously related species are widely separated. But for minor divisions this distinction is probably valid.

Legs.—The femora are rarely linear, being usually more or less clavate or dilated in the distal half and often bearing a tooth on the under surface. In only two genera containing small or minute species, *Rhynchænus* (*Orchestes*) and *Rhamphus*, are the insects able to jump, and the hind femora are consequently thickened. The tibiæ are frequently armed with spurs at the apex; when there is a spur or mucro at the inner angle, the tibia is described as mucronate; and when the outer angle is produced so as to form a curved hook, it is called unguiculate. The tarsi are frequently attached to the tibiæ in a truncate area at the apex of the latter, which is usually very oblique; this area is known as the corbel, and the forms which it assumes in the hind tibiæ are of considerable systematic importance.

The tarsi are apparently 4-jointed, except in *Dryophthorus*, in which they are distinctly 5-jointed, but in many cases traces of the missing joint can be observed at the base of the nominal fourth joint. Again in a few genera—*Anoplus* (Europe), *Diabathrarius* (Africa), *Aonychus* (Australia) and *Atelicus* (Australia) —the latter joint is entirely absent, the third being broadly dilated, but not bilobed as usual. For the most part the third joint is dilated and bilobed, and in such cases it is clothed beneath with a spongy covering of dense short adhesive hairs. In the purely terrestrial forms (the extreme paucity of which is a striking feature of the Curculionid fauna of India) this joint is not or but slightly broader than the others, and the tarsus is then clothed beneath with longer non-adhesive hairs or with stiff bristles. Such slender tarsi are also characteristic of the few genera of aquatic weevils (*Bagous*, *Hydronomus*, *Ephimeropus*), as well as of the COSSONINÆ. The structure of the claws is of much systematic value. In the normal condition they are capable of independent movement, but are always more or less closely approximated, being then described simply as *free;* in a great many groups they are fused together at the base, and sometimes to well beyond the middle, being then called *connate;* frequently they are more or less separated at the base and placed at a wide angle, when they are known as *divaricate;* in a few cases there is only a single claw—*Atmetonychus* (Indian), *Holonychus* (Madagascar), *Barilepton* (American), *Brachybamus* (American), *Haplonyx* (Australian), *Mononychus* (Holarctic); occasionally the claws are armed with a tooth, and more rarely they are cleft.

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* The intervals are also numbered outwards, the space between the suture and the first striæ being the first interval.

Abdomen.—The number of abdominal segments requires further investigation. Leconte and Horn considered that the normal number of tergites was seven, but that in all the subfamilies except RHINOMACERINÆ, RHYNCHITINÆ, ATTELABINÆ, APIONINÆ and CALANDRINÆ the males had the seventh tergite divided into two, while the females had only the normal seven. The validity of this interpretation appeared doubtful when it was discovered that in African species of several genera of ADELOGNATHI (*Polycleis*, *Neocimbus*, *Strophosomus*) the females have a distinct eighth tergite, almost as large as that of the male, while in two other genera, *Proscephaladeres* and *Eremnus*, and in some Indian *Episomus*, this tergite was distinctly visible, though for the most part withdrawn beneath the seventh. Further dissections render it highly probable that in every case where there are only seven tergites visible a concealed anal one will be found, the number having been ascertained to be the same (namely, eight) in both sexes of all the species examined so far. In the majority of these species I have noticed a silky patch on each side at the base of the seventh tergite. They are situated just beneath the complicated fold of the wing, and it seems probable that they may serve as a soft pad on which the delicate membrane can rest without risk of damage, this view being supported by the fact that they have not been found in those species in which the wings are reduced or absent. The shape and position of these patches may possibly yield good diagnostic characters.

On the ventral aspect only five segments are normally visible, the two basal ones having permanently disappeared. Lacordaire (Gen. Col. vi, p. 12) mentions two genera—*Ithycerus* (North America) and *Dichotrachelus* (Europe)—in which there is a sixth segment. Leconte and Horn state that the number is never more than five, the appearance of a sixth segment being merely due to the accessory tergite of the male having been pushed into a ventral position. While their interpretation may possibly be correct in certain cases, the general statement that there is never a true sixth ventral segment cannot be maintained. In those genera, such as *Neocimbus* and *Polycleis*, in which the females have a well-exserted eighth tergite, there is, paired with this tergite, a strongly chitinised sixth ventral plate, which, though normally concealed, is capable of being exserted. Its occurrence in this sex has also been noted elsewhere and will probably prove to be general.

In the great majority of genera the first two visible segments (in descriptions the two vanished ones are not counted) are more or less soldered together, even though they may appear to be separated by a superficial suture, the nature of this suture and the relative lengths of the intermediate segments affording good generic distinctions. The basal segments are entirely free in only a few subfamilies, such as RHINOMACERINÆ, RHYNCHITINÆ, BELINÆ and EURRHYNCHINÆ.

Superficial clothing.—As compared with other Coleoptera, the weevils are remarkable for the very large percentage of forms that are clothed with scales. In a few subfamilies all the species are devoid of scales, but these are all groups containing very few genera, such as ATTELABINÆ, RHYNCHITINÆ, APIONINÆ, CYLADINÆ, BELINÆ, TRYPETINÆ, etc. In the COSSONINÆ and CALANDRINÆ the occurrence of scaling is a rare exception, many species in the latter subfamily exhibiting a characteristic pruinose covering; while in the BARIDINÆ, which comprises a very large number of species, the great majority are glabrous. Comparatively little attention has been paid by systematists to the structure of the scales, though these often exhibit good specific, and even generic, characters. They vary greatly in shape, and are sometimes fringed with hairs, while in some groups (*e. g.* CLEONINÆ) each scale may be split up into a mere bunch of feathery filaments.

In the squamose groups the intervals of the elytra almost invariably bear more or less regular rows of setæ, which frequently furnish excellent specific characters. In certain pubescent genera, such as *Lixus* and *Larinus*, the colouring is produced by a coating of a fine powdery substance, which is very easily abraded. Laboulbène insisted that this efflorescence was of a cryptogamic nature (Ann. Soc. Ent. France, 1848, p. 301; 1850, p. 17), but there can now be but little doubt that it is actually secreted by the insects themselves, and Lacordaire (Gen. Col. vi, p. 417) and others have recorded that the substance can be renewed by the living insects after it has been rubbed off; in several cases it forms a regular pattern. In a few Eastern genera (*Alcides* and

Pæpalosomus) some of the species are capable of producing more striking secretions in the form of white wax-like flocculent excrescences, similar in character to those of various COCCIDÆ and FULGORIDÆ.

Sexual Dimorphism.

There are comparatively few instances of very marked sexual disparity in the CURCULIONIDÆ, and there should rarely be any difficulty in associating the sexes of any given species. In certain genera, especially among the more rotund wingless terrestrial forms, the difficulty lies in the opposite direction, and in the case of such insects as *Blosyrus* or *Brachycerus* there are often no reliable external characters by which the sexes can be discriminated.

The sexual distinction that is perhaps of the most general occurrence is to be found in the first ventral segment, which is more or less strongly impressed in the middle in the male, while in the female it is flat or even slightly convex; but to this there are very numerous exceptions. In those forms that have a comparatively short rostrum, this organ is rarely different in the two sexes (though occasionally the genæ have a lateral process in the males), but the females are generally larger and have the sides of the elytra more strongly rounded, while the fifth ventral segment is frequently more pointed in this sex. When the rostrum is elongate, it nearly always exhibits good sexual characters. If there is any difference in size, that of the female is longer and more slender; while when the length is equal, the rostrum of the male is nearly always more coarsely punctured and the punctures extend nearly or quite up to the apex, whereas in the female the apical half, or more, is very finely punctate or even quite smooth.

The inequality in the length of the rostrum is most marked in a South African species of *Antliarrhinus* that oviposits in the cones of Cycads; in the male this organ is about as long as the head and prothorax, while in the female it is nearly three times as long as the whole body. In some Calandrine genera (*Protocerius*, *Rhynchophorus*) the rostrum of the male is distinguished by a row of tubercles or a crest of hairs on its upper surface, while in *Rhina* it has a dense fringe of long hairs beneath.

Differences in the form of the antennæ are not rare. For example, in *Eurrhynchus* (Australia) and *Cylas* the solid club is much longer in the male; in *Cercidocerus* the club is enormously elongate transversely in the male, so that the antenna has the shape of a pickaxe; in some Indian *Apoderus* the terminal joint of the male is produced into a curved process; and in *Mecomastyx* (New Caledonia) the scape of the male may be anything from 6 to 12 times as long as that of the female.

There are certain instances, as in the very large Indian weevils of the genus *Cyrtotrachelus*, in which the front legs of the males are unusually elongated, and in various genera of CRYPTORRHYNCHINÆ the front tibiæ or tarsi may be fringed with long hairs in this sex; in certain OTIORRHYNCHINÆ—*Systates* (Africa), *Cyrtozemia* (India)—the hind or middle tibiæ are often strongly curved or toothed in the males.

One of the few cases in which the two sexes have been regarded as distinct species is the African *Polycleis longicornis*, Fhs.; not only is the colouring strikingly different, but the shape of the prothorax is quite dissimilar, and the antennæ are much longer in the male. Another remarkable sexual character is the long spine which projects forwards on each side of the prosternum in some *Centrinus* (America) and *Mecopus*; and the hairiness of the males in *Hypomeces* (India) is an unusual form of dimorphism. The reason for the extraordinarily elongate head in the males of some *Apoderus* is by no means clear, but the two hooks at the apex of the tibia in the female (the male having only one) is doubtless connected with her leaf-rolling habits.

Stridulation.

The stridulatory apparatus in CURCULIONIDÆ has received but little attention, and in 1900 Dr. C. J. Gahan briefly summarised what was known on the subject (Trans. Ent. Soc. Lond. 1900, pp. 449–451). So far as has been ascertained at present, these organs are confined to the HYLOBIINÆ, CRYPTORRHYNCHINÆ, CEUTHORRHYNCHINÆ, and some allied groups. In all the cases known to Dr. Gahan the sound is produced by the rubbing of the pygidium or propygidium against the apex of the elytra, and this may be effected in two ways:—(1) the files may be situated on the under surface of the elytra, along the apical portion of the suture, the scrapers consisting of a number of granules on the pygidium; or (2) the files may be placed on the pygidium, while an oblique ridge near the apex of each elytron serves as a scraper, against which the file is rubbed by a movement of the abdomen. In some species, such as the European *Cryptorrhynchus lapathi*, L., the stridulating mechanism is found in the male sex only, the files being placed on the elytra; in others, belonging to the genera *Plinthus*, *Acalles*, *Mononychus*, etc., the organs occur in both sexes, the files being again on the elytra; while in a third group, first recognised by Dr. Gahan, both sexes are able to stridulate, but the files are on the elytra in the males and on the pygidium in the females. To the last-named group belong certain species of the following Indian genera: *Cryptorrhynchus*, *Camptorrhinus*, *Gasterocercus* and *Ectatorrhinus*.

Larvæ.

Despite their undoubted economic importance, extremely little is known about the early stages of Indian CURCULIONIDÆ, and, indeed, this applies to the family as a whole; for even in

Europe and North America, where alone the subject has received any considerable attention, the species whose larvæ and pupæ have been described form a very small percentage of the whole.

The outstanding feature of Curculionid larvæ is that they are, without exception, legless, and their general appearance is remarkably similar even in the most widely separated subfamilies (*cf.* figs. 8, 9, 10). In those species which lead a more or less stationary existence (and this is true of the great majority of the known forms) the larvæ are rather stout, with the body distinctly curved and only slightly narrowed towards the tail end. The head is entirely exserted, rounded and fully chitinised, being of a testaceous colour, while the rest of the body is greyish white or ivory white, except in the few species that are external feeders, in which the body has a certain amount of green or

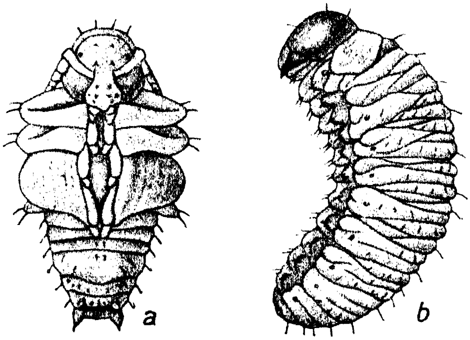

Fig. 8.—Early stages of *Otiorrhynchus ligustici*, L.: *a*, pupa, ventral view *b*, larva, lateral view. (After I. V. Vassiliev.)

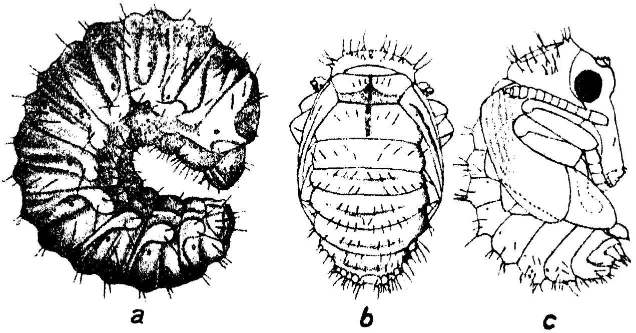

Fig. 9.—Early stages of *Rhynchites ruber*, Fairm.: *a*, larva, lateral view; *b*, pupa, dorsal view; *c*, pupa, lateral view. (After Silvestri.)

brown pigment. The mandibles are well developed and are often obtusely toothed; the maxillæ are almost contiguous to the labium and have a short angular internal process which carries the small palpus, composed of two or three joints; the mentum is large and scarcely separable from the labium, being furnished with two very short two-jointed palpi. The antennæ are usually absent, being represented merely by a small prominence near the base of the mandible bearing a single hair; but occasionally a minute two-jointed antenna is present. The larvæ are normally blind, but the external feeders have one, two or three ocelli. The three thoracic segments are rather more developed than the abdominal ones, and bear only a single pair of spiracles, which are situated on the prothorax, though occasionally they occur on the mesothorax. Of the nine abdominal segments, there is a pair of spiracles on each of the first eight; in the CALANDRINÆ alone is there a chitinous termination to the ninth segment.

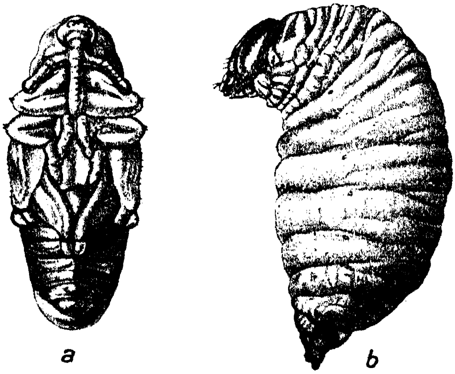

Fig. 10.—Early stages of *Rhynchophorus ferrugineus*, Oliv.: *a*, pupa, ventral view; *b*, larva, lateral view.

In the curved sedentary larvæ the structure of the body segments is in no way remarkable, but in those forms which inhabit galleries in the stems of plants (e.g. *Lixus*) or make mines in the parenchyma of leaves (e.g. *Rhynchænus*) the body is usually hairy and the segments frequently bear callosities or tubercles (both dorsally and ventrally) set with short bristles, which enable the larva to move backwards and forwards in its gallery. These larvæ are never curved and generally they are more narrowed posteriorly.

Habits and Life-Histories.

So far as is known at present, all CURCULIONIDÆ, both in the larval and adult stages, feed only on vegetable substances; but Mr. C. F. C. Beeson, Imperial Forest Zoologist at Dehra Dun, informs me that he has reasons to suppose that the very small cylindrical weevils of the genus *Phœnomerus* are predaceous on bark-beetles of the family SCOLYTIDÆ. The slender rostrum and minute mandibles of these weevils seem ill-adapted to such a diet, and judgment on the question may well be suspended until definite evidence is forthcoming.

In the adult stage the majority of weevils frequent the foliage of trees, shrubs and herbaceous plants, comparatively few of them being especially attracted to flowers. Another large section, containing representatives of many subfamilies, are mainly terrestrial in their habits. In this group, which is but poorly represented in the Indian fauna, the species are, almost without exception, dull-coloured and have lost the power of flight. In the purely terrestrial forms the tarsi have partly or completely lost the adhesive spongy pads on their lower surface; many of the others only pass the day on the ground for purposes of concealment, ascending their food-plants at night to feed. Some half-dozen European genera have been described in which the species are entirely subterranean in their habits, and in all of these the eyes are absent or quite rudimentary; doubtless similar forms will be found to occur in India. A few genera of weevils are truly aquatic, the larval stage being passed in the stems of water-plants beneath the water. Two such genera have been recorded from within our limits, namely, *Bagous* and *Litodactylus*; the species of the former are not able to swim, but merely drift through the water if they lose their hold on the food-plant, whereas the species of *Litodactylus* use their legs for swimming, although these are not in any way specially modified for the purpose. Among the COSSONINÆ the majority of the species are to be found under bark, a mode of life which is very unusual in other subfamilies. It is somewhat remarkable, seeing the diversity of their tastes, that no species of this family appear to have been found living in fungi. A very few truly myrmecophilous and termitophilous weevils have been described, but hitherto none has been recorded from India.

Taken as a whole, the colouring of weevils is distinctly sombre, greys and browns being in overwhelming preponderance. With few exceptions the gayer colours and patterns are due to the scaly covering, the integument being usually black or brown, though sometimes yellowish in the forms that frequent flowers. Outside of the RHYNCHITINÆ brilliant metallic colouring of the integument is scarcely to be found except among the BARIDINÆ and their immediate allies; among the CALANDRINÆ I know of only a single, apparently undescribed, species from Singapore in which the elytra are of a metallic green colour. In spite of this general tendency to sobriety in colour, the CURCULIONIDÆ have produced some of the most beautiful creatures in the insect world, among which may be mentioned the large sky-blue *Eupholus* of Papua; the *Pachyrrhynchus* of the Philippines, adorned with strange patterns glittering with green, blue, gold and copper;

the resplendent *Cyphus* and *Entimus* (popularly known as Diamond Beetles) of Brazil; and the bejewelled *Cratopus*, peculiar to the islands of the Indian Ocean.

The comparative paucity of conspicuously marked species probably indicates a general lack of qualities distasteful to those animals which would be likely to prey upon them, such as an unpleasant taste or smell, the possession of which it would be profitable to advertise by means of conspicuous coloration. The schemes of colouring are for the most part undoubtedly procryptic, that is to say, they harmonise with the natural surroundings of the insect so as to render it inconspicuous; and this is probably true of the metallic green scaling which so frequently manifests itself among the small leaf-eating species of many different genera of ADELOGNATHI, but which, for some reason that is not obvious, is extremely rare among the species with a long rostrum that have similar habits.

But though they may be deficient in active deterrents for their enemies, the weevils have very widely adopted an effective passive means of defence, namely, extreme hardness, not infrequently accompanied by the presence of sharp spines on the thorax and elytra which must render them uncomfortable morsels for swallowing whole. This method of protection is naturally best developed in the larger wingless terrestrial forms. The species of *Pachyrrhynchus*, referred to above, are certainly extremely hard and may possess other deterrent qualities, and there seems to be some reason for supposing that their striking patterns have a warning significance, for they are mimicked with extraordinary accuracy by certain Longicorns of the genus *Doliops*. Similarly, in other parts of the world various large terrestrial weevils are closely resembled by wingless Longicorns having similar habits. These are the only recorded cases in which we may reasonably assume that weevils have served as models for other insects. On the other hand, no case has yet been demonstrated of a weevil mimicking another insect, and this is the more remarkable when we consider what vast numbers of CURCULIONIDÆ there are and what extremely varied, and sometimes fantastic, forms they have assumed.

Most weevils are somewhat slow in their movements, and it is only among certain groups of the ZYGOPINÆ with rather short elytra and slender legs that we find any species that are really active; these insects, when disturbed, are capable of taking to flight quite as rapidly as tiger-beetles of the genus *Cicindela*. With most species the unfolding of the wings is a rather laborious process, and no doubt it is mainly on this account that they have so widely adopted the disconcerting habit of dropping suddenly from their food-plant into the herbage beneath on the slightest sign of danger. The protective value of this method of escape is further enhanced by a kind of behaviour that is more widely prevalent in this family than among other beetles, namely, the death-feigning instinct. This is especially well marked in those groups, such as the CRYPTORRHYNCHINÆ and CEUTHORRHYNCHINÆ, in which there is a pectoral channel for the reception of the rostrum; with this organ hidden away and the legs packed closely together (the femora are frequently grooved to receive the tibiæ) the insect may readily be mistaken for a lump of earth, a bit of bark or a bird-dropping. The larger ground-frequenting species when feigning death often lie with the legs fully and stiffly extended in a bunch. As these limbs are by no means easy to break, this attitude would render it difficult for smaller birds to swallow them; but that it is hardly an effective protection against large birds may be illustrated by the fact that I have taken from the crop of a single South African bustard, among other insects, 65 fair-sized ground weevils belonging to 19 different species, and evidently all of them had been swallowed whole.

It is by no means clear what is the special function of the rostrum in those species in which this organ is relatively short and stout, and similar in the two sexes; but in the long-beaked forms it has been sufficiently shown that the slender rostrum of the female is used to enable her to bore a hole into some special portion of the food-plant which is suitable for the reception of her eggs. In such species the character may have been first developed in the female and then transferred to the male; just as in most bees the pollen-collecting apparatus is partly developed in the males, to whom it is quite useless, and may even be perfectly developed, as in *Bombus*.

In the case of *Balaninus* it has been definitely stated (*cf.* Bargagli, Bull. Soc. Ent. Ital. xv, 1883, p. 314) that the female, after boring the hole, deposits the egg in the orifice and pushes it down to the bottom with its rostrum, which thus entirely fulfils the functions of an ovipositor. This statement has been reiterated by various authors, but apparently without direct confirmation. Fabre (Souv. Entomol. vii, p. 115) has with some justice contended that such a procedure is in the highest degree improbable, and in the case of *Balaninus elephas*, Gyl., he has sufficiently demonstrated that the egg is deposited directly at the bottom of the bore-hole by means of an extensible, membranous ovipositor about as long as the rostrum. It seems likely that this will prove to be the normal method of oviposition.

Much has been written concerning the remarkable habits of the leaf-rolling species of *Rhynchites*, *Apoderus*, etc., which are well represented in the Indian fauna. The method adopted is to some extent conditioned by the size of the leaves of the food-plant. When these are small, a whole leaf, or even more than one, is utilised to form the funnel or packet which is destined to serve at the same time as food and protection for the larvæ; but more often only a portion of a leaf is used, and the manner in which this is cut out and folded appears to be characteristic for each species. The rolls of *Rhynchites* are usually more elongate, funnel-shaped, or cigar-shaped, while those of *Apoderus* and *Attelabus* are relatively shorter and approximately cylindrical.

No sort of adhesive appears to be used in the construction of the rolls, but the curling of the leaves is effected by patient and continuous pressure, while they are prevented from unrolling by an ingenious method of tucking in the ends and the free edge. In every case the weevil weakens either the leaf-stalk or the point of attachment of the roll by nibbling, so that in a few days it falls to the ground, and the mature larva eventually enters the soil to pupate.

It is somewhat remarkable that while some of the European *Rhynchites*, such as *R. betulæ*, L., have evolved this elaborate method of providing for their young, other species of the same genus have adopted a much more simple procedure; for example, the larvæ of *R. cupreus*, L., and *R. bacchus*, L., feed merely on the pulp of certain fruits; those of *R. auratus*, Scop., live in the kernels and those of *R. icosandriæ*, Scop., and *R. interpunctatus*, Steph., in the buds of their food-plants. What may perhaps be regarded as a first step in the direction of a leaf-rolling habit is to be found in certain OTIORRHYNCHINÆ. For example, the common Indian *Episomus lacerta*, F., lays a batch of eggs on a leaf, which is folded over so as to cover them, the edges being gummed together by means of a sticky secretion; the larvæ on hatching gnaw through the leaf and drop to the ground (Fletcher, 'Some South Indian Insects,' p. 327). W. Dwight Pierce records an almost identical habit in the case of the North American *Compsus auricephalus*, Say (Proc. Ent. Soc. Washington, xviii, 1916, p. 7), and so have Osborn and Mally for *Epicærus imbricatus*, Say (Proc. Iowa Ac. Sci. iii, 1896, p. 207), and it is probable that this is not an unusual method of oviposition in the subfamily.

The habits of the larvæ are very varied, and every portion of a plant is liable to attack, as the following brief list will show:—

Leaves (externally):—*Hypera*, *Coniatus*, *Cionus*, *Phytobius*.
,, (rolled):—*Rhynchites*, *Attelabus*, *Apoderus*.
,, (mined):—*Rhynchænus*, *Rhamphus*, *Brachyonyx*.
Flower-heads:—*Larinus*, *Apion*, *Anthonomus*, etc.
Fruits and Seeds:—*Apion*, *Sibinia*, *Nanophyes*, *Balaninus*, *Cryptorrhynchus*, *Calandra*, and numerous other genera.
Stems of Herbaceous Plants:—*Apion*, *Lixus*, *Ceuthorrhynchus*, *Alcides*, *Baris*, etc,
Tree-trunks:—*Hylobius*, many CRYPTORRHYNCHINÆ, *Sipalus*, *Rhynchophorus*, many COSSONINÆ, etc.
Roots:—*Tanymecus*, many OTIORRHYNCHINÆ, *Sitones*, *Brachycerus*, many CLEONINÆ, etc.
Tubers:—*Cylas*, *Euscepes*.

From the foregoing statement it will be seen that the vast majority of Curculionid larvæ are internal or subterranean feeders, and it is probable that the loss of the legs has resulted from their sedentary mode of life. The adoption by a few genera of the habit of feeding externally on leaves may thus be a more recent development, and it is interesting to note that this has not led to the reappearance of true legs, but that a quite different mechanism has been evolved to enable the larva to maintain its position and move about the surface of the plant. This is effected by means of a viscous secretion which covers the whole body in a very thin layer and within which the larva progresses by undulatory movements, often aided by the presence of setigerous tubercles on the lower surface. A number of different observers have definitely stated that this secretion, or a similar one used by many genera for the lining of their cocoons, is emitted from a retractile dorsal tubercle on the last segment just above the anus; but recently F. Knab (Proc. Ent. Soc. Washington, 1915, p. 154) has contended that this statement is inaccurate and that the substance is emitted from the anus itself. His view is in agreement with the earlier observations made by Fabre on *Larinus maculosus*, Schh., and *L. ursus*, F. (Souvenirs Entom. vii, pp. 68, 84) and on *Cionus similis*, Müll. (*op. cit.* x, p. 84). Fabre considered that the secretion was derived from the Malpighian tubes, and Knab agrees that this is probably the principal source, but that the rectal glands also contribute to it, and possibly likewise the surface glands distributed over the body. When these external-feeding larvæ are full-grown, they construct from this secretion cocoons which are attached to the food-plant. This work is done entirely with the mouth, the viscous material being drawn out into silk-like threads. In the case of *Hypera* the cocoons are elegant net-work structures of a white, yellow or green colour, through which the pupa can be seen; while those of *Cionus* are bladder-like, and in some instances present a very striking resemblance to the seed-capsules of the plants on which they occur.

The movements of coleopterous pupæ are generally very limited, but those of some species of *Hypera* are capable of twisting themselves round and round in their cocoons with extraordinary rapidity when disturbed. This is perhaps done for the purpose of disconcerting a possible enemy, and is comparable with the habit of certain spiders of rapidly vibrating their webs in similar circumstances. The pupæ of some species of *Lixus* are capable of moving up and down the hollow stems in which they lie by means of their dorsal bristles. In this connexion it may be mentioned that one of the so-called "jumping seeds," which frequently attract attention, is due to the movements of a Curculionid larva, *Nanophyes tamaricis*, Gyl., which lives in the seeds of a European species of tamarisk.

The external-feeding larvæ of an American weevil, *Cœlogaster lituratus*, Dietz, are recorded by Knab (*l. c.* p. 155) as covering themselves with their own excreta for purposes of concealment, as is done by the larvæ of the asparagus beetles (*Crioceris*). Some species of the semi-aquatic genus *Phytobius* also show a tendency in this direction.

One of the most interesting uses of the anal secretion of Curculionid larvæ is to be found in the genus *Larinus*. These insects generally pass the larval stage in the heads of various flowers, usually of the thistle family, and most of them pupate in the same position. But in Asia Minor, Persia and Northern India there are certain species, including *L. maculatus*, Gyl., and *L. syriacus*, Gyl., the larvæ of which leave the flower-heads when full-grown and construct on the stem of the plant a nodular cocoon, of the size of an olive, formed of a dirty white, chalky substance secreted by the Malpighian tubes. These cocoons form an article of commerce in the East, being largely used both medicinally and as a food. The constituent materials have been chemically studied by Berthelot (C. R. Acad. Sci. Paris, xlvi, 1858, pp. 1276–79) and have been found to contain about 66 per cent. of a sago-like substance, known as trehalum, and 28 per cent. of a sugar allied to cane-sugar and called trehalose. For medical purposes a decoction is made from the cocoons before the weevils have matured, and this is considered to be a very effective remedy for bronchial catarrh.

Another allied larva has also been utilised in medicine, namely, *Rhinocyllus antiodontalgicus*, Gerbi, and, as its specific name implies, it was supposed in certain parts of Europe to afford a remedy for tooth-ache. The bulky larvæ of *Rhynchophorus* and allied genera are eaten as delicacies by the natives in many parts of the tropics; and in Australia A. M. Lea notes that the larvæ of a species of *Strongylorrhinus*, which occur in large galls on Eucalyptus trees, are "eaten by the blacks, and by not a few white men" (Proc Linn. Soc. N. S. W. xxii, 1897, p. 619).

The gall-making habit is not an uncommon one in the family, being found in such genera as *Sibinia*, *Apion*, *Nanophyes*, *Gymnetron*, *Miarus*, *Ceuthorrhynchus*, *Baris*, etc., and the galls may be made on either the stems or the roots of the food-plants. Two European species of *Balaninus* are stated to make use of the galls of certain Hymenoptera for their own larvæ.

In 1902 the Russian entomologist, A. A. Silantjev, made the interesting discovery of the existence of parthenogenesis in the genus *Otiorrhynchus*. He was struck by the fact that while pairs of the less common *O. asphaltinus*, Germ., were frequently observed, this was never the case with *O. turca*, Boh., although this is an abundant vineyard pest of which he had seen hundreds of thousands. One thousand specimens taken at random proved to be all females, and subsequently specimens were reared parthenogenetically (Zool. Anzeiger, xxix, 1906, p. 583). Later, I. V. Vassiliev showed the same to be the case with *O. ligustici*, L. (Zool. Anz. xxxiv, 1909, p. 29); while in Italy in 1913 Grandi demonstrated the existence of the same phenomenon in *O. cribricollis*, Gyl., of which he states that no male specimen is yet known (Bull. Lab. Zool. Portici, vii, 1913, p. 17).

Classification.

Apart from Lacordaire's work, the only serious attempt to devise a comprehensive classification of the Curculionidæ is that made by Leconte and Horn (G. H. Horn, Trans. Amer. Phil. Soc. 1873, p. 407; J. L. Leconte, Amer. Natural. viii, July, 1874, pp. 385 and 452; Leconte and Horn, Proc. Amer. Phil. Soc. xv, 1876, p. xi), and this was founded almost entirely on a study of New World species only. The principal divisions adopted by these two authors were as follows:—

1	(12)	Abdomen dissimilar in the two sexes, ♂ with an additional final segment; elytra with an acute lateral fold on the lower surface	ALLOGASTRA.
2	(11)	Antennæ with an annulated or solid club.	
3	(8)	Tarsi narrow, setose.	
4	(7)	Gular margin very prominent, mentum retracted.	
5	(6)	Prosternum not excavated	**Amycteridæ.**
6	(5)	Prosternum excavated	**Byrsopidæ.**
7	(4)	Gular margin not prominent, mentum large	**Brachyceridæ.**
8	(3)	Tarsi dilated, usually with a brush of hairs beneath.	
9	(10)	Mandibles with deciduous tip, leaving a scar	**Otiorrhynchidæ.**
10	(9)	Mandibles simple, usually pincer-shaped ..	**Curculionidæ.**
11	(2)	Antennæ with 11 separate joints........	**Brenthidæ.**
12	(1)	Abdomen similar in the two sexes.	
13	(18)	Elytra without any lateral fold on the lower surface	HAPLOGASTRA.
14	(15)	Labrum distinct; mandibles flat, simple..	**Rhinomaceridæ.**
15	(14)	Labrum wanting.	
16	(17)	Mandibles flat, toothed on outer and inner edges	**Rhynchitidæ.**
17	(16)	Mandibles stout, pincer-shaped	**Attelabidæ.**
18	(13)	Elytra with a distinct lateral fold on the lower surface	HETEROGASTRA.
19	(22)	Pygidium vertical or declivous.	
20	(21)	Antennæ geniculate, clubbed; labrum wanting; last spiracle covered by ventral segments	**Calandridæ.***
21	(20)	Antennæ straight; labrum distinct; last spiracle not covered by ventral segments	**Anthribidæ.**
22	(19)	Pygidium horizontal, smaller.	
23	(24)	Antennæ geniculate, clubbed	**Scolytidæ.**
24	(23)	Antennæ straight.	
25	(26)	Ventral segments very unequal; antennæ with annulated club	**Apionidæ.**
26	(25)	Ventral segments nearly equal; antennæ with eleven separated joints...........	**Belidæ.**

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* Including the COSSONINÆ.

The primary division in this classification has reference to the number of visible abdominal tergites; in the ALLOGASTRA the males are considered to have 8, and the females 7; while in the two other groups both sexes have 7. Apart from the obvious inconvenience of utilising for such a purpose a distinction which is confined to one sex, it has been pointed out above that there are some important exceptions which were unknown to Leconte and Horn. In various genera falling within their OTIORRHYNCHIDÆ the females have eight visible tergites and not seven (see p. 14); while on the other hand I have observed several cases of males with seven tergites only in genera which would fall into their restricted CURCULIONIDÆ, namely, *Bagous*, *Metialma* and an undescribed genus near *Acallopistus*; and in this group also there are two African genera the females of which have eight tergites instead of seven, namely, *Omophorus* and *Nerthops*; again in examining half-a-dozen species of COSSONINÆ, which are supposed to have seven tergites in both sexes, I have found an undescribed African species which has eight in the male, and an Indian species, *Brachytemnus cephalotes*, Fst., which has no more than six; finally, Bedel has already stated that the males of *Apion* have eight, and not seven tergites. That the distinctions noted by Leconte and Horn are of considerable taxonomic importance cannot be doubted, but it is clear that their real significance cannot be properly appreciated until a much larger number of Curculionid genera have been examined for the purpose.

The secondary character upon which the three main groups have been founded is also subject to serious exceptions. Although the HAPLOGASTRA are stated to have no inferior carina on the elytra, in many of the larger Old World *Rhynchites* and most *Attelabus* this carina is distinct, and sometimes as strongly developed as in any other CURCULIONIDÆ. On the other hand, in many wingless ALLOGASTRA, such as *Byrsops* and *Eremnus*, the carina is entirely wanting, while in others, such as *Episomus*, *Strophosomus*, *Amphitmetus*, etc., it is often quite rudimentary.

In these circumstances it seems hardly probable that a combination of the two foregoing characters would lead to a reliable indication of inter-relationships, which is the object of all classification, and this is exemplified by a comparison of the two divisions ALLOGASTRA and HETEROGASTRA. Here we find such groups as the APIONIDÆ and CALANDRIDÆ widely separated from the CURCULIONIDÆ, with which they are closely related, and intimately associated with the ANTHRIBIDÆ, a family with which they have obviously much less affinity. Moreover, the proposal to subdivide Lacordaire's family CURCULIONIDÆ into eleven families is open to the criticism that the resulting groups are clearly quite disproportionate; in other words, the subdivision has been carried either too far, or not far enough.

As already indicated, it appears more satisfactory to retain Lacordaire's conception of the family, and for the purpose of this work the main lines of his classification will be followed.

The two main divisions of the family may be defined thus :—

The mentum comparatively large and filling, or nearly filling, the buccal cavity behind the mandibles, so as to conceal more or less completely the maxillæ and their palpi ; the submentum not pedunculate, or at most with a very short, broad peduncle (fig. 4, *a*, *c*)......	ADELOGNATHI.
The mentum comparatively small or narrow in relation to the buccal cavity (or even completely hidden), and leaving the maxillæ entirely or very largely exposed *; the submentum usually with a well-marked peduncle supporting the mentum (fig. 3, *b*-*d*)	PHANEROGNATHI.

The only serious difficulty which arises in connexion with these characters is in the genus *Cratopus* (BRACHYDERINÆ), which includes several species that have a well developed peduncle to the submentum, so that a considerable portion of the maxilla is exposed; but the few Indian species are fully adelognathous.

Division I. *ADELOGNATHI.*

No subdivision of this group that has yet been proposed can be regarded as really satisfactory. The following arrangement is practically that of Lacordaire, with the addition of the TANYRRHYNCHINÆ, which he erroneously placed among the Phanerognaths; also I have followed Aurivillius (K. Vet. Akad. Handl. xxi, no. 15, 1885) in separating the MICROCERINÆ from the BRACHYDERINÆ. Although the difference in the form of the scrobe in the latter subfamily and the OTIORRHYNCHINÆ is for the most part sufficiently distinct, it must be admitted that there are a few African genera whose position in this respect is somewhat dubious. Again, the dividing line between the OTIORRHYNCHINÆ and EREMNINÆ becomes very fine in places, for the ocular lobe on the prothorax in the latter subfamily is often considerably reduced, while the bunch of vibrissæ in a few cases contains only three or four hairs which may readily be overlooked, as has been done by Faust in more than one case. Even the mandibular scar is far from constituting a really sharp character, for, as Leconte himself recognised, in certain sections it seems to be gradually disappearing; but neither he nor subsequent authors appear to have noticed that in the genus *Brachycerus*, which nominally has no scar, there are not a few African species that have distinct mandibular appendages. Their obvious affinities would make it absurd to place these insects in a different family or even subfamily, and we can only recognise that in this particular case the scar has, at most, no more than a generic value.

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* In the SIPALINÆ (fig. 3, *e*) and CRYPTODERMINÆ the mouth-parts are abnormal, there being no emargination of the submentum ; the buccal cavity is thus situated at the extreme apex of the rostrum and is entirely filled by the mandibles, so that all the other mouth-parts, including the mentum and maxillæ, are invisible.

The subfamilies mentioned in the key that do not come within our limits are placed in square brackets. The LEPTOPINÆ are mainly South American, the remainder occurring mostly in Australia; the MICROCERINÆ are purely African; while the BRACHYCERINÆ are predominatingly African, though well represented in the Mediterranean subregion.

Key to the Subfamilies.

1 (10) Antennæ elbowed; tarsi spongy beneath, the third joint bilobate.
2 (9) Mandibles pincer-like and obtuse, with a scar that forms a support for a deciduous appendage (figs. 4, 5).
3 (6) Scrobes of the rostrum forming a sublinear furrow and curving downwards in front of the eye, generally lateral in position (fig. 1, *d*).
4 (5) Prothorax without a lobe on the anterior margin below the eye. BRACHYDERINÆ, p. 30.
5 (4) Prothorax with ocular lobes .... [LEPTOPINÆ].
6 (3) Scrobes never at the same time sublinear and curving downwards, directed towards the eye and generally subdorsal in position, often much dilated and very shallow behind (fig. 1, *b*).
7 (8) Prothorax without an ocular lobe or vibrissæ on the anterior margin .... OTIORRHYNCHINÆ, p. 204.
8 (7) Prothorax with either an ocular lobe or vibrissæ or both...... EREMNINÆ.
9 (2) Mandibles comparatively slender and pointed, without a deciduous appendage or a scar .. TANYRRHYNCHINÆ.
10 (1) Antennæ not elbowed; the tarsi not spongy beneath, but setose, the third joint not bilobate.
11 (12) Tibiæ transversely truncate at the apex for the reception of the tarsi .... [MICROCERINÆ].
12 (11) Tibiæ obliquely truncate at the apex .... [BRACHYCERINÆ].

Subfamily I. BRACHYDERINÆ.

The genera of this subfamily are very poorly represented in the Indian subregion, except the TANYMECIDES, which are here more numerous than in any other part of the world. The character that distinguishes this group, namely, the short fringe of curved hairs on the front edge of the prothorax below the eye (fig. 1, *d*, *v*), is always conspicuous in good specimens, and the hairs are very rarely lost even in abraded examples. Another important characteristic is the structure of the apical portion of the hind tibia. This is obliquely excised on its inner face for the reception of the tarsus, the excision being known as the corbel, and being, with few exceptions, quite devoid of scaling. When the outer side of the corbel is bounded by a single ridge fringed with bristles, it is said to be open or simple; but often there may be observed within this ridge a narrow oblique plate, the inner edge of which forms a second ridge, also fringed with bristles, and in such a case the corbel is described as enclosed.

Key to the Groups.

1 (8) Anterior margin of prothorax without any pencil of projecting hairs (vibrissæ) below the eye.
2 (5) Corbels of hind tibiæ open; hind coxæ not reaching the elytra.
3 (4) The three intermediate segments of the venter of approximately equal length, the second separated from the first by a deep and straight incision .... **Blosyrides**, p. 30.
4 (3) The second ventral segment much longer than either of the next two, and separated from the first by a curved impressed line .... **Naupactides**, p. 44.
5 (2) Corbels of hind tibiæ broadly enclosed; posterior coxæ reaching the elytra.
6 (7) Elytra without any humeral angle; the prothorax truncate or slightly rounded at the base .... **Cneorrhinides**, p. 47.
7 (6) Elytra with a distinct humeral angle; the prothorax strongly bisinuate at the base .... **Cyphides**, p. 50.
8 (1) Anterior margin of prothorax with vibrissæ .... **Tanymecides**, p. 58.

Group I. BLOSYRIDES.

These are wingless, slow-moving, and often rotund insects of small size and dull colouring, several of the species being almost entirely terrestrial in their habits. They are well characterised by the structure of the venter, which is very unusual in the subfamily.

Key to the Genera.

1 (2) Antennæ with the scape not reaching the hind margin of the eye, the funicle with joint 2 not longer than 1; hind corbels with the external margin bent inwards BLOSYRUS, Schh., p. 31.
2 (1) Antennæ with the scape exceeding the hind margin of the eye, the funicle with joint 2 longer than 1; hind corbels with the external margin not bent inwards .... BLOSYRODES, Jek., p. 38.

Genus **BLOSYRUS.**

Blosyrus, Schönherr, Disp. Meth. 1826, p. 99; Lacordaire, Gen. Col. vi, 1863, p. 29.

Blosyrinus, Jekel, Col. Jekel. 1875, p .149 (n. syn.).—Type, *B. inæqualis*, Boh.

TYPE, *Curculio oniscus*, Oliv.

Head strongly transverse, separated from the rostrum by a deep transverse furrow, the eyes lateral, small, subglobular and very prominent. *Rostrum* porrect, short and broad, plane above, angulate laterally, triangularly impressed and emarginate at the apex; the scrobes quite lateral, deep, parallel-sided and curving strongly downwards in front of the eye; mandibles with a slightly projecting scar; mentum almost circular, filling its cavity but sunk below the edges, the submentum with no peduncle. *Antennæ* inserted at or before the middle, the scrobe short, straight, strongly clavate and exceeding the front margin of the eye; the funicle with the two basal joints a little longer, 1 equal to or greater than 2, 3–7 subequal in length but gradually widening outwardly, the club 4-jointed, the basal joint the longest, the segments oblique. *Prothorax* more or less transverse, truncate at the apex, the base truncate or subangulate, the sides rounded, the gular margin sometimes sinuate. *Scutellum* invisible, or minute. *Elytra* variable in shape, with or without humeral angles, with 10 striæ or sulci, the lateral margins only slightly sinuate above the hind coxæ. *Sternum* with the front coxæ nearer the anterior margin of the prosternum; the mesosternum with the epimera narrow and much smaller than the episterna; the metasternum shorter than the median coxæ, the episterna distinct but narrow, the hind coxæ not reaching the elytra. *Venter* with the inter-coxal process subangulate or truncate, segments 2–4 subequal, 2 separated from 1 by a deep transverse incision. *Legs* stout, the femora clavate and simple, the tibiæ almost straight externally, the anterior pairs produced inwardly at the apex, the hind pair with the corbels open, but with the external edge sloping inwards; the tarsi broad, joint 2 short and a little narrower than 1, 3 broadly lobate, 4 elongate, claws small and connate at the base.

Range. Africa, India, Burma, Indo-Malayan Islands, China and Japan.

Key to the Species.

1 (10) Elytra with no transverse row of conical tubercles across the top of the declivity.

2 (3) Elytra subquadrate, the shoulders produced into a prominent angle, the intervals not granulate, the setæ broadly flattened and scale-like .... *asellus*, Oliv., p. 33.

3 (2) Elytra ovate or globose, the shoulders not produced, the setæ simple and not flattened.

4 (7) Elytra ovate, with recumbent setæ, the intervals rugosely granulate; head with three deep furrows, the prothorax slightly broader than long.

5 (6) Elytra with conspicuous white spots (occasionally reduced to two basal ones only—var. *olivieri*, Fst.); central costæ on the head not produced behind the eyes, eyebrows low .... *oniscus*, Oliv., p. 33.

6 (5) Elytra without white spots; costæ on the head continued a little beyond the eyes, eyebrows higher...................... *herthus*, Hbst., p. 35.

7 (4) Elytra subglobose, with erect setæ.

8 (9) Head with a single shallow furrow: prothorax slightly broader than long, strongly narrowed behind; elytra with the intervals uneven *unisulcatus*, sp. n., p. 38.

9 (8) Head with three furrows; prothorax more than twice as broad as long, slightly narrowed behind; intervals of elytra even and set with tubercles or granules .... *ornatus*, Fst., p. 37.

10 (1) Elytra with a transverse row of 4 or 6 conical tubercles across the top of the declivity, the basal margin deeply sinuate.

11 (12) Elytra with a sharp humeral prominence, with a transverse row of 6 tubercles across the top of the declivity and 2 prominent tubercles on the declivity itself. *inæqualis*, Boh., p. 35.

12 (11) Elytra without a humeral prominence, and with no tubercles except a row of 4 across the top of the declivity .... *bengalensis*, sp. n., p. 36.

1. Blosyrus asellus, *Oliv.*

Curculio asellus, Olivier, Ent. v, 83, 1807, p. 356, pl. 24, f. 347; Fåhræus, Schönh. Gen. Curc. v, 1839, p. 909.
Blosyrus philippinensis, Jekel,* Col. Jekel. ii, 1875, p. 153 (n. syn.).
Blosyrus superciliosus, Chevrolat,* Le Natural. ii, 1882, p. 93 (n. syn.).

Colour black, with greyish-brown scaling; the prothorax with two paler lines, which are continued on to the base of the elytra; each elytron with an oblique discal pale stripe from the shoulder and a faint transverse band behind the middle.

Head with a deep central furrow and a shallow one on each side of it. *Rostrum* with the transverse basal furrow continued right up to the eyes, parallel-sided, broadly and deeply impressed in the middle and with a narrow central carina. *Antennæ* with the basal joint of the funicle slightly longer than the second. *Prothorax* a little broader than long, apex rather narrower than the base and both subtruncate, sides slightly rounded, broadest before middle; upper surface convex, with deep scattered punctures, each containing a short scale-like seta, and with a narrow, more or less abbreviated, central carina. *Elytra* with the basal margin subtruncate, broader than the base of the prothorax, the external angles scarcely projecting, shoulders broad and strongly produced into a sharp humeral angle, the sides subparallel from there to the middle; upper surface convex, with regular deeply punctured striæ, the intervals comparatively broad, smooth and subcostate, the alternate ones slightly more elevated and with rows of suberect broad scale-like setæ, interval 4 with a small tubercle at its apex. *Legs* moderately stout, with dense brown scaling and depressed pale setæ.

No external differences in the sexes, except the smaller size of the ♂; the apical abdominal segment is not impressed in either sex.

Length, 4¼–6¼ mm.†; breadth, 2¼–3½ mm.

BENGAL; ASSAM; BURMA; ANDAMANS; CAMBODIA; MALACCA; SUMATRA; BORNEO; PHILIPPINES.

Type in the Paris Museum; of *B. philippinensis* in the British Museum, of *B. superciliosus* at Stockholm.

This widely spread species varies considerably in size and markings.

2. Blosyrus oniscus, *Oliv.*

Curculio oniscus, Olivier, Ent. v, 83, 1807, p. 355, pl 24, f. 346; Boheman, Schönh. Gen. Curc. i, 1833, p. 552.
Blosyrus oniscus, var. *olivieri*, Faust, Ann. Mus. Civ. Genova, xxxiv, 1894, p. 170 (1895).

Colour black with grey-brown scaling; prothorax usually with a faint whitish line on each side of the base; each elytron with the following pure white spots: one at the base of interval 3, one at the shoulder, one near the apex of interval 5 and a transverse row behind middle of from 2 to 6 more or less contiguous spots which are very variable in size and shape, and sometimes entirely absent.

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* An asterisk after the name of a species in the synonymy indicates that the type or a cotype has been examined by the author.

† The rostrum is never included in lengths given.

Head coarsely punctured and with three very deep sulci on the forehead. *Rostrum* separated from the head by a deep transverse sulcus which extends to the eyes, parallel-sided, rugosely punctured, very broadly and deeply impressed in the middle and with a narrow shiny central carina. *Antennæ* with the basal joint of the funicle slightly longer than the second. *Prothorax* a little broader than long, apex and base truncate and of about equal width, sides rounded, broadest well before middle; upper surface convex, closely and evenly set with shiny black granules, without any central carina, but with a short transverse impressed line on each side about middle. *Elytra* ovate, the basal margin faintly sinuate and broader than the base of the prothorax, with the external angles acutely projecting, shoulders obliquely rounded, but sometimes (especially in ♀) with a small humeral tubercle, sides rounded, broadest about middle; upper surface convex, with regular sulci containing large ill-defined punctures, the intervals narrow, evenly raised and rugosely granulate, interval 4 with two small tubercles in the apical half, the posterior one covered with white scales.

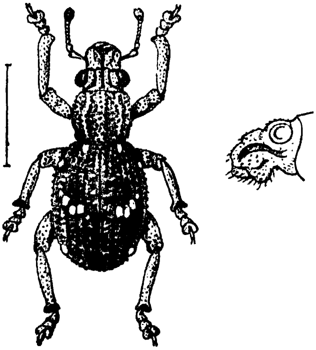

Fig. 11.—*Blosyrus oniscus*, Oliv.

Both sexes have a deep central impression on the apical ventral segment, but that of the ♂ is deeper and broader than that of the ♀. The anterior tubercle on interval 4 is almost always obsolete in the ♂.

Length, 7-9½ mm.; breadth, 4-5½ mm.

Bengal: Calcutta. Assam: Sylhet, Khasi Hills; Silonibari (*H. Stevens*). Burma: Pegu (*E. T. Atkinson*); Momeit (*Doherty*); Palon (*L. Fea*); Tharrawaddy and Taung-ngu (*G. Q. Corbett*).

Type not traced; of *B. olivieri* in the Genoa Museum.

A very variable species; in a few examples all the white spots have disappeared except the two at the base. The var. *B. olivieri*, Fst., is the form in which there is no trace of the discal row of spots.

Abraded specimens are very like *B. herthus*, Hbst., but the latter species is slightly narrower and the greatest depth of the elytra is at the middle, the posterior declivity being at first much more gradual and becoming more abrupt and slightly sinuate near the apex; the central furrow on the forehead narrows posteriorly and disappears behind the eyes. In *B. oniscus* the greatest depth of the elytra is behind the middle and the posterior declivity is equally steep throughout; the central furrow is continued evenly on to the vertex.

3. **Blosyrus herthus**, *Hbst.*

Curculio herthus, Herbst, Käf. vii, 1797, p. 64, pl. 98, f. 14.
Blosyrus herthus, Boheman, Schönh. Gen. Curc. viii, pt. 2, 1845, p. 401; Jekel, Col. Jekel. ii, 1875, p. 147.
Blosyrus chinensis, Boheman, Res. Eugen. 1859, p. 120.

Colour black, with fairly dense, uniform, grey scaling, the scales sometimes having a coppery reflexion.

Head, *rostrum*, *antennæ* and *prothorax* as in *B. oniscus*, Oliv. *Elytra* more narrowly ovate, the basal margin subtruncate and broader than the base of the prothorax, but with the external angles scarcely projecting, shoulders obliquely rounded, the ♀ very rarely with a small humeral tubercle; upper surface with regular sulci, containing rather smaller and less distinct punctures than in *B. oniscus*, the intervals narrow, evenly raised and with fairly regular rows of shiny black granules; the 5th interval without the posterior tubercles, except very rarely in the ♀.

The apical ventral segment is not impressed in the ♀, and the impression in the ♂ is much shallower than in either sex of *B. oniscus*.

Length, $5\frac{1}{4}$–$8\frac{1}{2}$ mm.; breadth, $2\frac{3}{4}$–$4\frac{3}{4}$ mm.

ASSAM. BURMA: Karen Hills (*Doherty*, *Fea*); Tavoy (*Doherty*). CAMBODIA (*Mouhot*). MALAY STATES. CHINA.

Type lost; type of *B. chinensis* not traced.

I agree with Jekel that the Chinese specimens (*B. chinensis*, Boh.) cannot be distinguished specifically; they seem to differ from Burmese examples only in having the eyebrows slightly more elevated.

4. **Blosyrus inæqualis**, *Boh.*

Blosyrus inæqualis, Boheman,* Schönh. Gen. Curc. viii, pt. 2, 1845, p. 402; Labram & Imhoff, Gen. Curc. Ic. ii, 1845, no. 40.
Blosyrus spongifer, Boheman,* l. c. p. 403.
Blosyrus tuberculatus, Redtenbacher,* Reise Novara, ii, 1867, p. 145 (n. syn.).
Blosyrinus inæqualis, Jekel, Col. Jekel. 1875, pp. 147 & 149.

Colour black, with dense uniform brown or grey scaling.

Head with five short frontal longitudinal sulci, which vary in width and depth, the supra-ocular elevation continuous with the rostrum and not intersected by the transverse sulcus, which does not reach the eye. *Rostrum* slightly narrowed anteriorly, with a straight central carina and a strongly curved carina on each side of it. *Antennæ* with the two basal joints of the funicle subequal, the club elongate. *Prothorax* strongly transverse, truncate at the apex, the base rounded, the sides subangulated a little before the middle; upper surface rugose, with numerous small granules and a few large tubercles, the central carina sometimes complete, but often obsolete anteriorly and usually bare at the base. *Elytra* globose, the basal margin deeply sinuate and a little broader than the base of the prothorax, the shoulders oblique and with a distinct humeral tubercle, the sides subparallel from this tubercle to behind the middle, then rapidly narrowed to the apex; upper surface convex, with regular rows of deep punctures, the alternate intervals more elevated than the rest; 3, 5 and 7 obsoletely tuberculate in the basal half and each with a distinctly larger tubercle behind the middle, these tubercles forming a curved transverse row; 5 with an additional tubercle much nearer the apex.

Length, 4½–6½ mm.; breadth, 3–5 mm.

BOMBAY: Sampgaon, Belgaum (*R. P. Barrow*). MADRAS: Mysore, Bangalore, Pondicherry; Coimbatore, 1000 ft. (*Capt. A. K. W. Downing*); on cluster beans, Hadagalli (Pusa Coll.); Nagody, 2500 ft., S. Kanara; on gingelly (*Sesamum indicum*), Adoni, Bellary dist.; N. Coorg (*L. Newcome*). CEYLON: Anuradhapura (*Dr. W. Horn*).

Type in the Stockholm Museum.

B. inæqualis var. spongifer, *Boh.*

Differs from the typical form only in the structure of the prothorax, which is much less rugose in appearance owing to the granules being all of approximately equal size and without the larger tubercles; the sides of the thorax are also less angulate and therefore it appears less transverse in shape. As these characters grade into those of *B. inæqualis* I agree with Jekel (*l. c.*) in regarding the present form as merely a variety; it is probably a local hill form.

MADRAS: Pillur, 3000 ft., Nilgiri Hills (*H. L. Andrewes*); Ouchterlony Valley, 3500 ft., Nilgiris (*Capt. A. K. W. Downing*); Palur, South Arcot.

Type in the Stockholm Museum.

5. Blosyrus bengalensis, sp. nov.

Colour black, with brown scaling, variegated with vague paler markings.

Allied to *B. inæqualis* var. *spongifer*, Boh., from which it differs, apart from its much smaller size, in the following respects. *Head* and *rostrum* less uneven. *Prothorax* much more finely granulate. *Elytra* without any humeral prominence, the striæ much narrower and comparatively finely punctate, the intervals much broader than the striæ, all evenly raised and entirely devoid of granules or tubercles, with the exception of a conical setigerous tubercle at the top of the declivity on interval 3 and a similar much smaller one on interval 5.

Length, 3½–4¼ mm.; breadth, 2½–3 mm.

W. Bengal: Barwa, Chota Nagpur (*Cardon*).

Type in the British Museum.

6. **Blosyrus ornatus**, *Fst.*

Blosyrus ornatus, Faust,* Deut. Ent. Zeit. 1897, p. 338.

Colour black, with brownish-grey scaling and dark brown markings, viz.: a quadrate scutellar patch, an irregular subbasal patch between striæ 3 and 5, a broad transverse dentate band behind the middle between striæ 2 and 6, and an ill-defined patch on the declivity.

Head with three narrow furrows, the intervals slightly convex and with a few scattered granules. *Rostrum* separated from the head by a deep trisinuate furrow, its sides gradually narrowed to the apex, with a deep central impression containing a bare carina and a narrower lateral furrow on each side. *Antennæ* rather slender, the two basal joints of the funicle subequal. *Prothorax* more than twice as broad as long, the sides slightly rounded, broadest about the middle, closely set with small conical granules and with a shallow transverse impression before the middle. *Elytra* globose, broadly sinuate at the base, with no humeral tubercle, broadest at the middle, deeply punctato-striate, the intervals rather narrow, all evenly raised and entirely devoid of granules or tubercles, the setæ short, stout and erect.

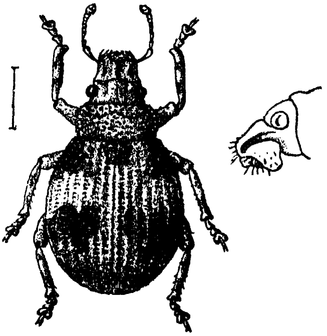

Fig. 12.—*Blosyrus ornatus*, Fst.

Length, 5 mm.; breadth, 4 mm.

Burma: Tharrawaddy (*G. Q. Corbett*).

Type in the Dresden Museum.

7. **Blosyrus unisulcatus**, sp. nov.

Colour black, with sparse grey scaling.

Head plane, with only a single shallow central furrow, the eyes not very prominent. *Rostrum* separated from the head by a straight furrow, dilated from the base to the apex in the ♂, parallel-sided in the ♀, shallowly impressed above and with a fine central carina. *Antennæ* with the scape nearly reaching the posterior margin of the eye, the funicle with joint 1 longer than 2. *Prothorax* slightly broader than long, the sides strongly rounded in front, broadest not far from the apex which is not narrower than the base, set with irregular low granules and with a transverse impression before the middle. *Elytra* subglobose, subtruncate at the base, the shoulders rounded, broadest before the middle, with shallow sulci containing large subreticulate punctures, the intervals narrow and rather uneven, with variable scattered small tubercles and granules, interval 3 sometimes with a rather prominent rounded tubercle behind the middle, the setæ stout and erect, the inflexed margins bare and shiny.

Length, 4–5 mm.; breadth, 2¼–3¼ mm.

BOMBAY: Bombay (*Fontanier*); N. Kanara (*T. R. D. Bell*); Londa, Belgaum (*H. V. Kemball*). MADRAS: Nilgiri Hills (*H. L. Andrewes*); Coorg (*L. Newcome*).

Types ♂ ♀ in the British Museum.

Boheman has recorded *Blosyrus hystrix*, Boh., as occurring in India (Schönh. Gen. Curc. i, 1833, p. 553), but as I have seen no specimens except the type in the Stockholm Museum, which is labelled "Canton," it seems probable that this record was an error.

Genus **BLOSYRODES**.

Blosyrodes, Jekel, Col. Jekel. 1875, p. 157.

TYPE, *Blosyrodes quadrinodosus*, Jek.

This genus is extremely close to *Blosyrus*, Schönh., and the following are the only characters by which I am able to discriminate it:—The scape when folded back in a position of rest exceeds the posterior margin of the eye; the second joint of the funicle is always a little longer than the first; the side-pieces of the meso- and meta-sternum are soldered together and without definite sutures, except that sometimes the episternal suture of the metasternum is visible in its anterior half.

The head is never so deeply furrowed as in most species of *Blosyrus*, the legs are more slender, and the external edge of the hind corbels is never inclined inwards.

***Range*. N.E. India and Burma.**

***Blosyrus unisulcatus*, Mshl., is an intermediate form, the**

antennæ resembling those of *Blosyrus*, while the side-pieces of the sternum are fused as in *Blosyrodes*; this fusion has also begun in *Blosyrus inæqualis*, Boh.

Key to the Species.

1 (12) Forehead not carinate.

2 (7) Elytra without tubercles on the disk and with regular punctate striæ throughout.

3 (6) Upper surface clothed with scales: the suture separating the head from the rostrum not angulated in the middle; the head with a narrow longitudinal impression on each side of the central furrow.

4 (5) Rostrum not angularly dilated at the apex, its sides straight; prothorax granulate.............. *quadrinodosus*, Jek., p. 39.

5 (4) Rostrum angularly dilated at the apex, its sides sinuate; prothorax punctate .... *variegatus*, Redt., p. 40.

6 (3) Upper surface without scales, but clothed with fine recumbent pubescence; the suture separating the head from the rostrum angulated in the middle; the head without lateral impressions .... *pubescens*, sp. n., p. 41.

7 (2) Elytra with prominent rounded tubercles on the disk.

8 (11) Elytra with irregular deep punctures on the disk, the shoulders rounded and without a prominent humeral tubercle.

9 (10) Elytra globose, with two shallow regular sulci on the inflexed margins, the juxta-sutural tubercles on the declivity conical; rostrum with a bare central carina and an indistinct oblique carina on each side of it .... *verrucosus*, sp. n., p. 41.

10 (9) Elytra oval, with three deep sulci on the inflexed margins; rostrum with a single carina .... *tuberosus*, sp. n., p. 42.

11 (8) Elytra subquadrate, with regular punctate striæ on the disk, the shoulders oblique and with a prominent humeral tubercle; rostrum very finely tricarinate .... *nodulosus*, sp. n., p. 43.

12 (1) Forehead with a central carina .. *nodulipennis*, Boh., p. 43.

8. Blosyrodes quadrinodosus, *Jek.*

Blosyrodes quadrinodosus, Jekel,* Col. Jekel. 1875, p. 159.
Blosyrus depressus, Faust,* Stett. Ent. Zeit. 1886, p. 129 (n. syn.).

Colour black, with dense brown scaling, obscurely variegated with paler scales.

Head almost plane on the forehead, with fine confluent punctation and three narrow sulci. *Rostrum* slightly dilated towards apex, the apical angles not acuminate, shallowly impressed in the middle, with a fine central carina and a shallow longitudinal impression on each side close to the lateral margin. *Prothorax* transverse, truncate at base and apex, the latter rather narrower, sides rounded, broadest before the middle; upper surface convex, set with low granules, which are sometimes covered by the scaling, and with a fine central carina (often much abbreviated) and a shallow impression on each side. *Elytra* quite similar to those of *B. variegatus*, Redt.

Apical ventral segment more elongate, more acuminate and convex in the ♀; with a shallow impression in the ♂.

Length, $4\frac{3}{4}$–$5\frac{1}{2}$ mm.; breadth, 3–$3\frac{3}{4}$ mm.

PUNJAB: Murree (*Stoliczka*); Dalhousie (*C. Somers Smith*).

Type in the British Museum; of *B. depressus* in the Indian Museum.

9. Blosyrodes variegatus, *Redt.*

Blosyrus variegatus, Redtenbacher,* Hügel's Kaschm. iv, 1848, p. 539.
Blosyrus costatus, Redtenbacher,* l. c. p. 540 (n. syn.).
Blosyrodes interruptus, Jekel, Col. Jekel. 1875, p. 161 (n. syn.).

Colour black, with brown scaling, obscurely variegated with paler scales, and with an ill-defined oblique pale band on each elytron.

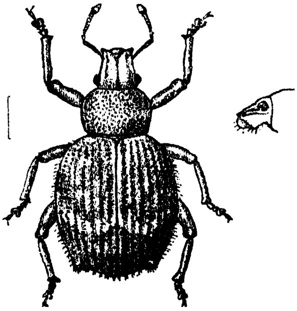

Fig. 13.—*Blosyrodes variegatus*, Redt.

Head plane, the rugose punctation hidden by the scaling, with a deep narrow central furrow and a shallow one on each side of it. *Rostrum* dilated at the apex and with the apical angles rather acutely prominent, almost plane above and with three narrow carinæ (sometimes obscured by the scaling). *Prothorax* strongly transverse, the sides rounded, broadest before the middle, the apex narrower than the base, evenly covered with distinct separated punctures and very short erect setæ, with a narrow central carina (sometimes obsolete) and two shallow lateral impressions on each side. *Elytra* subglobose, broadest about the middle, the shoulders rounded, subdepressed in the middle of the disk, with shallow distinctly punctured striæ, the intervals narrow and subcostate, the alternate ones often slightly more raised, interval 5 with two tubercles posteriorly, the anterior one often faint, and a similar faint tubercle near it on interval 7, the setæ stiff and erect. *Legs* piceous, the tarsi reddish.

Length, $3\frac{3}{4}$–$4\frac{3}{4}$ mm.; breadth, $2\frac{1}{2}$–$3\frac{1}{4}$ mm.

KASHMIR (*von Hügel*). UNITED PROVINCES: Mussoorie, 7000 ft. (*Lefroy*—Pusa Coll.).

Type in the Vienna Museum; also type of *B. costatus*; that of *B. interruptus* in the collection of Sign. Angelo Solari.

10. **Blosyrodes pubescens**, sp. nov.

Colour black, with thin recumbent pale pubescence and without scaling.

Head rather convex, finely and shallowly punctate, with a narrow central stria and no lateral impressions, separated from the rostrum by a strong angulated furrow, which is deep in the middle and much finer laterally. *Rostrum* slightly dilated towards the apex, its sides straight, quite plane above, finely aciculate and with only a faint central carina in the apical half. *Prothorax* transverse, the sides rounded, broadest before the middle, the upper surface with fine rugose punctation and with a low smooth central carina. *Elytra* broadly ovate, widest before the middle, regularly punctato-striate, the intervals broader than the striæ, smooth and slightly convex, interval 5 with a prominent rounded tubercle at its apex; the setæ short and suberect, more noticeable in the posterior half.

Length, $4\frac{1}{2}$ mm.; breadth, $2\frac{3}{4}$ mm.

BALUCHISTAN: Kaha Pass (type). KASHMIR: Jerjii, 11,200 ft., towards Gilgit (*Col. G. M. Giles*—Ind. Mus.).

Type in the British Museum.

11. **Blosyrodes verrucosus**, sp. nov.

Colour black or piceous brown, rather thinly covered with brown scaling having a coppery reflexion.

Head almost plane between the eyes and with three narrow sulci, with fine confluent punctation which is hidden by the scaling. *Rostrum* gradually narrowed from base to apex, with a shallow central impression containing a narrow bare carina, and with a faint longitudinal depression on each side near the margin. *Prothorax* broader than long, base and apex of about equal width, sides strongly rounded, broadest before middle; upper surface convex, uneven, with low rounded granules and a faint transverse impression towards the apex, the central carina very short, narrow and shiny (absent in one example). *Elytra* globose, the basal margin subtruncate, the sides strongly rounded, broadest at the middle;

upper surface with very irregular rows of large punctures, each elytron having three rows of large rounded distant tubercles, which bear patches of very short scale-like setæ; between the tubercles there are usually a few irregular granules; the inflexed margins with two shallow sulci containing regular rows of large punctures.

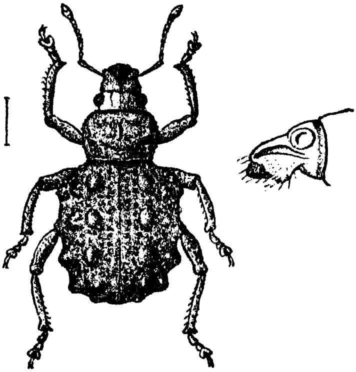

Fig. 14.—*Blosyrodes verrucosus*, Mshl.

Length, 4¼–5 mm.; breadth, 2¾–2½ mm.
Burma: Ruby Mines (*Doherty*).
Type in the British Museum.

12. **Blosyrodes tuberosus**, sp. nov.

Colour black, with sparse minute brown scales.

Allied to *B. verrucosus*, Mshl. *Head* and *rostrum* as in that species. *Prothorax* much broader in relation to the elytra and with its sides much more strongly rounded, the upper surface more finely and closely granulate and without the transverse impression. *Elytra* much narrower, oval, the inflexed margins with three deep sulci, the juxta-sutural tubercles on the declivity elongate and not conical, the punctation on the disk coarser and less irregular in the basal half.

Agreeing with *B. verrucosus* in other respects.
Length, 6½ mm.; breadth, 3 mm.
Assam (*Col. W. F. Badgeley*).
Type in the British Museum.

13. **Blosyrodes nodulosus**, sp. nov.

Colour black, with uniform earth-brown scaling.

Head plane, with slight supra-ocular ridges and a short central furrow. *Rostrum* gradually dilated towards the apex and with the apical angles prominent, the upper surface plane and with three very fine carinæ, the outer ones converging strongly behind. *Prothorax* rather broader than long, the sides subparallel in the basal half, roundly ampliated in the apical half, the apex a little narrower than the base, rather uneven and rugosely punctate above (the sculpturing partly hidden by the scaling), and with a broad shiny central carina on the basal half. *Elytra* subquadrate, the shoulders oblique as far as the prominent humeral tubercle at the base of interval 7, the upper surface with rather broad and deeply punctate striæ which are fairly regular, except about the top of the declivity, the intervals rather narrow and uneven; interval 3 with a rounded tubercle behind the middle and a low elevation just behind it; interval 5 with a row of three rounded tubercles, the front one being the lowest and at about the middle, the hindmost one being on the declivity and very prominent; interval 7 with an indistinct tubercle about the middle; the setæ very short and depressed; the inflexed margins with three regular sulci.

Length, 5¼ mm.; breadth, 3¼ mm.

UNITED PROVINCES: Allahabad.

Type in the British Museum.

14. Blosyrodes (?) nodulipennis, *Boh.*

Strophosomus nodulipennis, Boheman, Schönh. Gen. Curc. i, 1833, p. 538.

"Somewhat larger than *Cneorrhinus geminatus*.

Head short, broad, massive, black and scattered with dark scaling, the vertex denuded, with very fine transverse striolæ, the forehead plane, rugulose, somewhat elevated above the eyes and with a longitudinal carina continued to the apex of the rostrum; eyes round, moderately prominent, blackish brown. *Rostrum* as long and nearly as broad as the head, stout, straight, plane above, rugulose and scattered with dark scales. *Antennæ* inserted near the apex of the rostrum, scarcely reaching the base of the thorax, rather slender, ferruginous red, sparsely pilose, with the club oblong-ovate and acuminate. *Thorax* nearly twice as broad as long, truncate at the base and apex, the sides somewhat rounded before the middle, slightly convex above, black, carinate dorsally, rugulose throughout and scattered with dark scales. *Scutellum* scarcely visible. *Elytra* ovate, slightly emarginate at the base, a little broader in front than the thorax and five times as long, the shoulders rounded, strongly ampliated close behind the base, narrowed again towards the apex, the apices themselves jointly and obtusely rounded, convex above, steeply declivous behind, deeply punctato-striate, with three slightly elevated tubercles behind the middle between the fourth and fifth striæ, the last one being more prominent; entirely black, covered throughout with dark brown scaling. Body beneath black, punctulate and sparsely squamose. *Legs* stout, unarmed, black, sparsely covered with pale pubescence and with scaling having a coppery reflexion; tarsi reddish, fulvous and spongy beneath.

Hab. Bengal (Mus. Hope)."

The type should be in the Oxford Museum, but has not yet been traced. There is no satisfactory evidence that the genus *Strophosomus* occurs in India, and I have therefore tentatively assigned this species to *Blosyrodes*. The carina on the forehead distinguishes it from all the known members of the genus, but in all other respects it appears to be extremely like *B. quadrinodosus*, Jek.

Group II. NAUPACTIDES.

Only a single Indian genus, *Cratopus*, Schh., falls within this group. Lacordaire placed it among his Cyphides, but seeing that the corbels of the hind tibiæ are not enclosed, it appears to be more satisfactorily placed in the Naupactides. The species of this group are mainly American, but a few genera occur also in Europe and Africa.

Genus CRATOPUS.

Cratopus, Schönherr, Disp. Meth. 1826, p. 120; id., Gen. Curc. ii, 1834, p. 46; Lacordaire, Gen. Col. vi, 1863, p. 123.

Type, *Cratopus triangularis*, Gyl. (Mauritius).

Head exserted, the eyes sublateral and longitudinal. *Rostrum* continuous with and shorter than the head, moderately stout, almost parallel-sided, the dorsal edges rounded, the apical margin shallowly sinuate; the scrobes broad and deep, strongly curved downwards or passing obliquely below the eyes, lateral, but the lower edge often visible from above; mandibles with a distinct scar, the mentum usually supported on a very short peduncle and concealing the maxillæ (Indian species), but occasionally the peduncle is longer and the maxillæ are more or less fully exposed. *Antennæ* slender; the scape gradually clavate, reaching or exceeding the posterior margin of the eye; the funicle with joints 3–7 comparatively short, the articulations of the club well marked. *Prothorax* transverse, strongly narrowed in front, truncate at base and apex, the apical margin slightly oblique at the sides, without lobes or vibrissæ. *Scutellum* distinct, variable. *Elytra* of variable form, not very broad at the shoulders, which are rounded or sloping, the base truncate or jointly sinuate, with 10 or 12 striæ; wings present. *Sternum* with the front coxæ nearer the anterior margin of the prosternum; mesosternum with the epimeron only slightly smaller than the episternum and separating it from the elytra at the base; metasternum longer than the middle coxæ, the episternum narrow but with a broad head, the hind coxæ not touching the elytra. *Venter* with the intercoxal process broad and ogival; segment 2 longer than 3 and 4 together and separated from 1 by a very strongly curved stria. *Legs* of variable length; the front pair longer and stouter than the others, with femora much thicker and armed with a single tooth below; all the tibiæ usually denticulate internally, the corbels of the hind pair not enclosed; the tarsal claws connate at the base.

Range. East Coast of Africa, and the islands of the Indian Ocean as far East as the Andamans and Nicobars.

Only one or two species of this typically insular genus have been found in Africa. Six species have been recorded by Schönherr from India, but as no specimens with authentic data have since been received from that country, and as three of the species are known to occur in Mauritius or neighbouring islands, it seems highly probable that the locality given by Schönherr for all these species is erroneous.

Key to the Species.

1 (4)	Elytra with twelve striæ; the metasternum between the coxæ much longer than the middle coxæ.	
2 (3)	Scales beneath the eye evidently broader than those on the forehead.	*adspersus*, Wtrh., p. 45.
3 (2)	Scales beneath the eye just as narrow as those on the forehead	*nicobarensis*, sp. n., p. 46.
4 (1)	Elytra with ten striæ; the metasternum only slightly longer than the middle coxæ	*sinhalensis*, sp. n., p. 46.

15. Cratopus adspersus, *Wtrh.*

Cratopus adspersus, C. O. Waterhouse,* Rept. Zool. Coll. 'Alert,' 1884, p. 576; Champion, Trans. Linn. Soc., Zool. (2) xvi, 1914, p. 400.

Colour black or piceous, evenly clothed with recumbent hair-like scales, through which the integument is readily visible; the scales are greyish with a slight green, blue or coppery reflexion, and scattered about the elytra are small groups of a few broader scales; the scutellum is densely clothed with whitish scales.

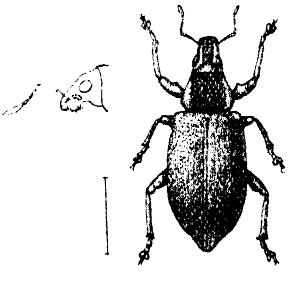

Fig. 15.—*Cratopus adspersus*, Wtrh.

Head with rather coarse shallow punctation, the intervals forming a transverse wrinkling, the forehead with a central fovea, its breadth almost equal to the length of the eyes, which are only moderately convex; the scales just beneath the eyes distinctly broader than those on the forehead. *Rostrum* somewhat shorter than the head, parallel-sided, almost flat above, with confluent punctures throughout and with a low smooth costa on each side running obliquely from above the antennæ to within the eye, the scrobe strongly curved. *Antennæ* varying from testaceous to brown, the scape not exceeding the posterior margin of the eye; the two basal joints of the funicle subequal, 3 and 4 about as long as broad, 5 and 6 slightly and 7 more decidedly transverse. *Prothorax* broader than long, the sides strongly rounded, broadest behind the middle, the base truncate, the apex much narrower, the upper surface evenly covered throughout with low granules which are more or less confluent. *Elytra* broadly ovate, the sides very slightly rounded, scarcely differing in shape in the two sexes, the base truncate or very faintly sinuate, the apices separately pointed; the striæ 12 in number, very shallow, but distinctly punctate, the intervals flat, finely and transversely rugose, the tenth more convex and slightly costate before the middle in the ♀ only, the lateral intervals with obliquely raised hairs, especially in the basal half. *Legs* from light to dark brown, rugosely sculptured, with pale hair-like scales and a denser ring beyond the middle on the hind femora, the tooth on the front femora comparatively small.

Length, 6–11 mm.; breadth, 2½–4½ mm.

MALDIVE Is.: Madu and Minikoi (*J. Stanley Gardiner*). SEYCHELLES. AMIRANTES. ALDABRA.

Type ♀ in the British Museum.

16. **Cratopus nicobarensis**, sp. nov.

Very similar to small specimens of *C. adspersus*, but narrower. The rostrum shorter in proportion to the eyes, which are larger, the scales beneath them as narrow as those on the forehead, which is slightly narrower than in *C. adspersus*. Elytra with the apical area a little more produced, the striæ more distinct, especially those on the inflexed margins, which are well defined right up to the base, the tenth interval more sharply costate in the ♀. The male organ with the spatula very much narrower and almost half as long again as in *C. adspersus*.

Length, 7–9 mm.; breadth, 2½–3½ mm.

NICOBAR Is. (*G. Rogers*—type). ANDAMAN Is. (*Roepstorff*).

Type ♂ in the British Museum.

17. **Cratopus sinhalensis**, sp. nov.

Colour black, evenly but thinly clothed with short pale hair-like scales having a coppery reflexion.

Head somewhat coarsely punctate, the eyes moderately convex, the length rather greater than the width of the forehead, the scales below the eyes scarcely broader than those above. *Rostrum* about as long as broad, parallel-sided, flattened or shallowly depressed above, with the usual convergent lateral costæ, the scrobes not much curved; the lower surface of the rostrum coarsely striolate at the base. *Antennæ* brown, the scape reaching the posterior margin of the eye, the funicle with joint 1 longer than 2, none of the other joints transverse. *Prothorax* a little broader than long, the sides rather strongly rounded, broadest a little behind the middle, the base truncate and distinctly marginate, the apex much narrower; the upper surface uniformly set with shallow coarse punctures bounded by low curved transverse granules. *Scutellum* with sparse hair-like scales. *Elytra* broadly ovate (♀), the shoulders very oblique, the sides moderately rounded, broadest behind the middle, the apical area rather strongly produced, the apices separately pointed, the basal margins jointly sinuate; with ten shallow punctate striæ, the intervals almost flat (except the 8th, which is somewhat costate) and finely granulate. *Legs* black, the tarsi piceous; the femora smooth and coriaceous, the front pair with only a small tooth; the tibiæ rugosely punctate.

Length, 9 mm.; breadth, $3\frac{3}{4}$ mm.

CEYLON: Peradeniya (*Dr. Thwaites*).

Type ♀ in the British Museum.

Only two specimens have been seen, and these were taken as long ago as 1854. Apart from the characters given in the key, this species may be separated from *C. adspersus*, Wtrh., by its much less transverse prothorax, the apically produced elytra, the sloping shoulders, and the longer last ventral segment, which is pointed and almost equilateral, whereas in the other two species it is obtusely rounded and the sides are much shorter than the base.

Group III. CNEORRHINIDES.

This group comprises Lacordaire's two tribes, CNEORRHINIDES and BARYNOTIDES, between which, as he himself admitted, there is no real dividing line. In India it is represented merely by two species of a purely Palæarctic genus, *Catapionus*, which just encroaches within our geographical limits.

Genus **CATAPIONUS**.

Catapionus, Schönherr, Gen. Curc. vi, pt. 2, 1842, p. 245.

TYPE, *Catapionus basilicus*, Boh.

Head separated from the rostrum by a curved furrow on each side in front of the eye, the furrows not quite meeting dorsally, the eyes lateral and convex, the forehead as broad as the base of the rostrum. *Rostrum* longer than the head, gradually widened from the base to the apex, the apical emargination shallow and rounded, the scrobes lateral (the apical half visible from above), deep, well defined and curving downwards towards the lower margin of the eye; the mandibles rather prominent, the scar indistinct and consisting of a narrow flattened space at the apex of the mandible; the mentum large and filling the entire buccal cavity behind the mandibles, the submentum with a short broad peduncle. *Antennæ* inserted before the middle, the scape only slightly exceeding the anterior margin of the eye, the two basal joints of the funicle subequal and a little longer than the third, which is longer than the rest, the club 3-jointed. *Prothorax* rounded at the sides, the apex almost vertically truncate, the gular margin not or shallowly sinuate, the base truncate or slightly rounded. *Scutellum* small, triangular. *Elytra* subtruncate or jointly sinuate at the base, without shoulders, with 10 punctate striæ or rows of punctures. *Sternum* with the anterior coxæ slightly nearer the anterior edge of the prosternum; the mesosternum with the epimeron much smaller than the episternum and separating it from the elytra at the base; the metasternum scarcely as long as the intermediate coxæ, its episternum well developed, the posterior coxæ reaching the elytra. *Venter* with the intercoxal process very broad and ogival, segment 2 not or only slightly longer than 3 or 4 and divided from 1 by a deep straight incision. *Legs* with the femora clavate and unarmed, the two front pairs of tibiæ with a short internal apical mucro, the corbels of the hind pair enclosed, the tarsi with the first joint strongly curved, 3 broader than the others, the fourth elongate, the claws connate at the base.

Range. Central Asia and Northern India.

18. **Catapionus basilicus,** *Boh.*

Catapionus basilicus, Boheman,* Schönh. Gen. Curc. vi, pt. 2, 1842, p. 247.

Colour black, with uniform rather thin metallic green scaling above and below.

Head with deep scattered punctures and short erect pale setæ, the forehead with a deep central furrow. *Rostrum* with punctation and setæ as on the head, with a shallow central furrow in the basal half and a faint central carina anteriorly, the genæ rather sharply angulated, the ends of the apical emargination produced in front to form two tubercle-like prominences. *Antennæ* black, with fine grey pubescence, the scape gradually clavate. *Prothorax* broader than long, proportionately larger in the ♂, the sides rounded, broadest about the middle, the apex narrower than the base and with a small median dorsal sinuation, the gular margin straight, the upper surface with scattered deep punctures which are larger and subconfluent towards the sides, and with a variable shallow central furrow. *Elytra* broadly ovate and with the sides strongly rounded in the ♀, narrower in the ♂, with fine shallow striæ containing rows of large shallow punctures which are broader than the striæ, the intervals scarcely convex, closely punctate and with short erect setæ. *Legs* black, with green scaling and short pale setæ.

Length, 10½ mm.; breadth, ♂ 5¾, ♀ 6¼ mm.

KASHMIR: Gilgit (Ind. Mus.).

Type ♀ in the Stockholm Museum.

I have seen only one specimen in addition to the type, namely, a ♂ from the Indian Museum.

19. **Catapionus semivittatus**, sp. nov.

Colour shining black, with markings of metallic green or bluish scaling; head and rostrum green, except just behind the eye; prothorax with four green stripes; elytra dorsally with green scaling in the punctures only, intervals 1 and 2 and interval 4 with a broad green stripe in the apical part, a broad green stripe throughout interval 6, and a similar marginal stripe which does not quite reach the base.

Head and *rostrum* very similar to those of *C. basilicus*, but with the genæ less sharply angulated and the corners of the apical emargination scarcely produced. *Antennæ* piceous, with the scape more abruptly clavate, the terminal joints of the funicle submoniliform. *Prothorax* about as long as broad in the ♂, a little broader than long in the ♀, the sides subparallel from the base to beyond the middle, then roundly narrowed to the apex, the gular margin sinuate, the upper surface with close shallow punctation and scattered deeper punctures, a shallow impression on each side behind the middle with a glabrous space adjoining, and a deep central furrow which is broadly impressed before and behind the middle. *Elytra* of about the same shape as in *basilicus*, without distinct striæ, but with rows of large separated foveæ or punctures, the intervals shiny and impunctate, the discal ones more or less uneven, the setæ longer and more sparse, but absent on the disk. *Legs* black, with sparse green scaling and dark setæ.

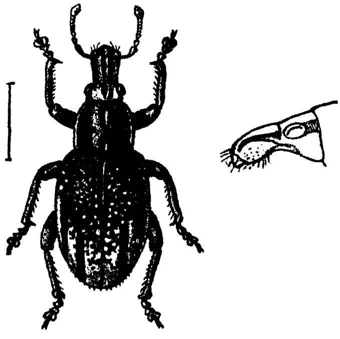

Fig. 16.—*Catapionus semivittatus*, Mshl.

Length, ♂ 6–7½, ♀ 7¾ mm.; breadth, ♂ 3–4, ♀ 4½ mm.

SIKKIM: Tungu, Teesta Valley, 13,000–14,000 ft. (type); Khamba Jong, 15,000–16,000 ft.

Types ♂ ♀ in the British Museum.

Group IV. CYPHIDES.

This group is most strongly represented in Tropical America, where it comprises some of the most strikingly coloured insects to be found among the Curculionidæ. Beyond that region only a few genera occur in the warmer parts of Africa and Asia. The species are all winged.

Key to the Genera.

1 (4) Base of the rostrum not broader than the forehead; eyes prominent, much shorter than the head.

2 (3) Scape not exceeding the anterior margin of the eye; hind tibiæ without an apical spine ...... DERMATOXENUS, g. n., p. 50.

3 (2) Scape exceeding the anterior margin of the eye; hind tibiæ with a long internal apical spine .... EUSTALIDA, Fst., p. 57.

4 (1) Base of rostrum much broader than the forehead; eyes large, almost as long as the head; scape exceeding the anterior margin of the eye .... DERMATODES, Schh., p. 55.

Genus **DERMATOXENUS**, nov.

TYPE, *Dermatodes vermiculatus*, Gyl. (Java).

Head exserted, more or less constricted and transversely impressed behind the eyes, which are small, short, ovate or almost circular and prominent, the forehead with a deep central furrow. *Rostrum* longer than the head, its base not broader than the forehead, strongly dilated at the apex, separated from the head by a transverse stria or furrow, scrobes curving downwards far in front of the eyes, the epistome large and bare, acuminate behind and shallowly emarginate at the apex, the mandibles a little prominent, the scar small and not very distinct, the buccal cavity behind the mandibles almost square, the mentum large but not quite filling the cavity, the submentum subtruncate and without any peduncle. *Antennæ* inserted at or before the middle of the rostrum; the scape clavate, curving forwards when erect, not or only just reaching the anterior margin of the eye; the funicle with the two basal joints longer than the others; the club large, ovate and 3-jointed. *Prothorax* bisinuate at the base, narrower and subtruncate at the apex, the gular margin not sinuate. *Scutellum* present or absent. *Elytra* separately rounded at the base, with a distinct humeral angle, subacuminate at the apex, the margin deeply sinuate above the posterior coxæ, and with 10 striæ. *Sternum* with the epimeron of the mesosternum much smaller than its episternum; the metasternum as long as or longer than the intermediate coxæ, the episternum present but sometimes very narrow, the posterior coxæ reaching the elytra. *Venter* with the intercoxal process very broad and ogival, segment 2 distinctly longer than 3 or 4 separately and divided from 1 by a deep straight incision. *Legs* elongate, the femora clavate, the anterior pairs of tibiæ curved and with a short internal spine at the apex, the corbels of the hind pair enclosed and with or without scaling internally, the tarsi with joint 3 very broadly lobate, the fourth elongate, the claws connate at the base.

Range. N.E. India, Burma, Malay Peninsula, Sumatra, Java, and Japan.

Dermatodes cæsicollis, Gyl., *Cneorrhinus nodosus*, Mots., and *Catapionus clathratus*, Roel., also belong to this genus.

Key to the Species.

1 (2) Scutellum distinct; elytra with a large rounded tubercle at the top of the declivity on interval 3. *binodosus*, sp. n., p. 51.
2 (1) Scutellum invisible; elytra without tubercles.
3 (6) Corbels of hind tibiæ densely squamose inside; shoulders of elytra prominent; prothorax with a central furrow; front coxæ in the middle of the prosternum.
4 (5) Eye situated midway between the front margin of the head and the posterior constriction; each elytron with two large bare rugose black patches on intervals 4 and 5 .... *quadrisignatus*, sp. n., p. 52.
5 (4) Eye much nearer front margin of head; elytra without bare patches .... *indicus*, sp. n., p. 53.
6 (3) Corbels of hind tibiæ bare; shoulders of elytra not prominent; prothorax without a central furrow; front coxæ nearer the anterior margin of the prosternum............. *helleri*, sp. n., p. 54.

20. **Dermatoxenus binodosus**, sp. nov.

Colour black, with uniform dense pale sandy scaling.

Head constricted and with a deep transverse impression behind the eyes, which are placed about midway between the anterior margin and the constriction, the forehead almost plane and with a deep central furrow. *Rostrum* separated from the head by a narrow transverse furrow in front of each eye, but the furrows not uniting dorsally, the genæ produced laterally into a sharp point, the upper surface with a broad and deep central impression widening towards the apex, and a faint longitudinal impression on each side at the base. *Antennæ* comparatively slender, with dense pale scaling, the scape scarcely reaching the eye, the funicle with joints 1 and 2 subequal, 3 slightly longer than 4, the terminal joints as long as broad, the club with the two basal joints subequal. *Prothorax* as long as broad, its sides subparallel from the base to beyond the middle, then narrowed to the apex, rugose above, with a deep central furrow which does not reach the base or apex and a curved interrupted furrow on each side of it. *Scutellum* distinct and circular. *Elytra* jointly emarginate in the middle of the base, the shoulders prominent, the sides subparallel, the striæ broad and deep and with deep separated punctures, which are clearly visible through the dense scaling, striæ 1 and 2 and striæ 3 and 4 converging together respectively at the base, the intervals convex, 5 slightly elevated, 3 broadly costate behind the middle, the costa terminating in a large rounded tubercle at the top of the declivity, the setæ pale sparse and depressed. *Legs* with dense pale scaling, the corbels of the posterior tibiæ bare internally, joint 2 of the posterior tarsi about as long as broad.

Length, 7½ mm.; breadth, 4 mm.

BURMA: Ruby Mines (*Doherty*).

Type in the British Museum.

21. **Dermatoxenus quadrisignatus**, sp. nov.

Colour black, with uniform dense brownish-grey scaling, each elytron with two large bare black patches on intervals 4 and 5, one before the middle, the other on the declivity.

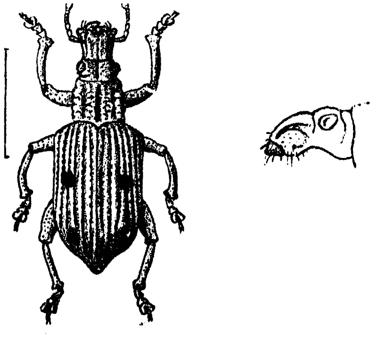

Fig. 17.—*Dermatoxenus quadrisignatus*, Mshl.

Head with a deep transverse basal impression, the eyes situated midway between the anterior margin and the basal constriction, the forehead elevated and with a very deep central furrow. *Rostrum* separated from the head by a deep continuous curved furrow, the sides parallel in the basal half, the genæ angularly dilated, the upper surface longitudinally impressed, with a deep central furrow and a shallow one on each side of it. *Antennæ* with dense pale scaling, the scape not reaching the eye, the funicle with joint 2 slightly longer than 1, the remainder transverse and subequal, the club dark, the first joint squamose at the base and much longer than the second. *Prothorax* slightly broader than long, broadest at the base, and very gradually narrowed from there to the apex, the apical margin rather oblique at the sides, the upper surface transversely rugose, with a very deep central furrow which does not quite reach the base or apex, and contains a bare carina, and another broad furrow on each side of it. *Elytra* separately rounded at the base, the shoulders broad and prominent, the sides subparallel, the striæ deep, with large punctures which are partially concealed by the very dense scaling, the intervals broad and convex, 4 and 5 with two large subquadrate bare and coarsely foveate patches, one before middle and the other on the declivity, interval 3 rather broader than 4 at the base, but narrower than it on the declivity, the setæ very short, thick, sparse and depressed. *Legs* stout, with dense scaling, the tarsi broad, the second joint of the hind pair strongly transverse, the corbels of the hind tibiæ densely squamose internally.

Length, 9 mm.; breadth, 4¾ mm.

BURMA: Palon (*Fea*); Maymyo (type) and Gokteik (*H. L. Andrewes*).

Type in the British Museum.

22. **Dermatoxenus indicus**, sp. nov.

Colour black, with dense brown scaling, turning to pale fawn, greyish or whitish on the sides, underparts and apex, the upper surface of the elytra usually variegated with similar pale markings, especially across the top of the declivity.

Head evidently constricted and transversely impressed at the base, the eyes placed close to the anterior margin, the forehead with a deep central furrow. *Rostrum* separated from the head by a narrow transverse furrow, the sides parallel at the base, the genæ sharply angulated, the upper surface shallowly impressed and with a deep central furrow. *Antennæ* with dense pale scaling, the scape not reaching the eye, the funicle with joint 1 slightly shorter than 2, 3–7 subequal and transverse, 4 rather longer, the club black, with joint 1 longer than 2. *Prothorax* as long as broad, widest at the base and gradually narrowing to the apex, transversely rugose, with a distinct central furrow varying in length and depth, and a similarly variable furrow on each side of it. *Elytra* similar to those of *D. quadrisignatus*, but without any bare patches, with the suture and alternate intervals slightly raised, and 3 broader than 4 throughout its length. *Legs* similar.

Length, 7¼–10½ mm.; breadth, 3¾–5½ mm.

ASSAM: Naga Hills (*Doherty*—type). SIKKIM: Mungphu (*Atkinson*); Lebong, 5000 ft. (*H. M. Lefroy*—Pusa Coll.).

Type in the British Museum.

Judging by the pointed anal segment all the seven specimens I have seen are probably females.

23. **Dermatoxenus helleri**, sp. nov.

Colour black, with uniform pale green (type), grey or sandy scaling.

Head with the basal constriction and impression shallow, the eyes rather elongate and a little nearer to the front margin than to the constriction, the forehead with a narrow furrow. *Rostrum* separated from the head by a fine furrow on each side, the furrows usually separated on the disk, but sometimes meeting to form a slight angle, the genæ broadly but bluntly angulated, the upper surface with a broad shallow longitudinal impression. *Antennæ* comparatively slender, with pale green or grey scaling, the scape just reaching the eye, the funicle with joint 1 a little shorter than 2, joints 3–7 subequal and not transverse, the club black and with joint 1 longer than 2. *Prothorax* about as long as broad, the sides subparallel from the base to beyond the middle, then rather sharply narrowed in the ♀, less sharply in the ♂, the upper surface more or less uneven and rugose, with a faint central carina and often a shallow impression on each side of it, and with scattered small black punctures. *Elytra* jointly sinuate in the middle of the base, the shoulders obtuse and not very prominent, the sides slightly rounded, broadest at or behind the middle, the striæ broad and with large deep punctures, but so filled in with the scaling that the striæ appear narrow and the punctures

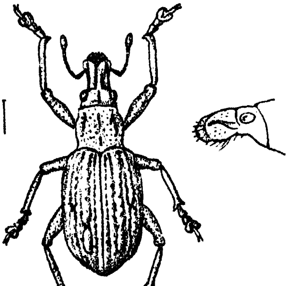

Fig. 18.—*Dermatoxenus helleri*, Mshl.

faint and shallow, striæ 1 and 2 and striæ 3 and 4 respectively converging at the base, the intervals convex, with small dark punctures containing minute setæ, the alternate ones more raised, 3 broadly interrupted twice behind the middle, 5 interrupted at the middle, and 7 on the declivity, these interruptions variable, striæ 1 and 2 containing rows of distant shiny granules in the basal half. *Legs* comparatively slender, with dense green scaling and small black spots, the corbels of the hind tibiæ not squamose inside, the second joint of the hind tarsi not transverse.

Length, ♂ 6¼–8½, ♀ 9–10 mm.; breadth, ♂ 3¼–4⅛, ♀ 5–5½ mm.

Assam: Manipur (*Doherty*—type); Ukhrul, 6500 ft., Manipur (*Rev. W. Pettigrew*—Ind. Mus.); Shillong, Khasi Hills (*Godwin Austen*—Ind. Mus.); Chirapunji, Khasi Hills (Ind. Mus.). Sikkim: Gopaldhara, Rangbong Valley (*W. K. Webb*).

Types ♂ ♀ in the British Museum.

D. helleri var. **simplex**, nov.

Differs from the typical form principally in the absence of the interruptions on the intervals of the elytra; the prothorax is also rather less rugose and the central carina more distinct.

Assam: Khasi Hills (*E. T. Atkinson*, *Col. W. F. Badgeley*).

Type ♀ in the British Museum.

D. helleri var. **subrotundus**, nov.

Distinguished from the preceding forms by its much shorter and more strongly rounded elytra, which are broadest far behind the middle; in the individual examined the posterior interruption on interval 3 and that on 7 are absent; the prothorax is quite smooth and there is no trace of a central carina.

Length, 7 mm.; breadth, 4½ mm.

N. India.

Type ♀ in the British Museum.

Genus DERMATODES.

Dermatodes, Schönherr, Gen. Curc. v, 1840, p. 895; Lacordaire, Gen. Col. vi, 1863, p. 109.

Lagostomus, Schönherr, op. cit. i, 1833, p. 612, nom. præocc.

Type, *Dermatodes paganus*, Gyl. (Java).

Head with the eyes large and only slightly convex, almost as long as the head and almost as broad as the forehead. *Rostrum* separated from the head by a curved furrow, its base much broader than the forehead, the scrobes deep and curving sharply downwards in front of the eye. *Antennæ* inserted before middle of the rostrum, the scape reaching the middle of the eye, the club with joint 1 longer than 2. *Prothorax* with the gular margin shallowly sinuate. *Scutellum* distinct, circular. *Sternum* with the anterior coxæ situated about the middle of the prosternum; the metasternum evidently longer than the intermediate coxæ, its episterna narrow. *Legs* with the corbels of the posterior tibiæ densely squamose inside.

The remaining characters as described for *Dermatoxenus*, Mshl.

Range. Andaman Islands, Sumatra, Java, and Japan.

24. **Dermatodes auratus**, sp. nov.

Colour black, with dense uniform golden green scaling, except on the head and rostrum, which are pale sandy with a slight metallic reflexion.

Head convex, the forehead only slightly broader than the eye, with a deep central furrow and with a few scattered punctures visible through the dense scaling. *Rostrum* stout, dilated from base to apex, separated from the head by a curved impression, the genæ bluntly angulate, the upper surface convex and without furrows or carinæ. *Antennæ* piceous, with dense pale scaling, the funicle with joint 2 thinner but hardly longer than 1, the remaining joints almost equal to one another. *Prothorax* broader than long, the sides subparallel from the base to beyond the middle, then narrowed to the apex, which is vertically truncate at the sides, the upper surface uneven and rugose, with a few small black granules showing through the scaling. *Elytra* ovate, with a deep central emargination at the base, the shoulders broadly rounded and rather sloping, the sides gradually narrowing from behind the shoulders, the apex rather sharply acuminate, the striæ narrow, the punctures scarcely visible through the scaling, the intervals broad and convex, the lateral ones with rows of small distant shiny black granules, the setæ very short, sparse and subdepressed. *Legs* with dense pale scaling having a metallic reflexion and with short thick setæ, the tibial spines short and hidden by the setæ, the second joint of the hind tarsi rather broader than long.

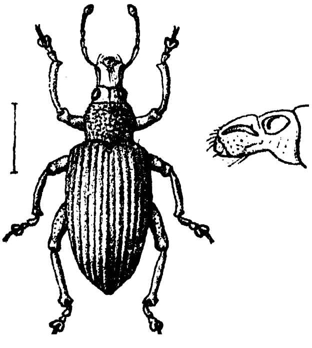

Fig. 19.—*Dermatodes auratus*, Mshl.

Length, 6¾ mm.; breadth, 3 mm.

ANDAMAN ISLANDS.

Type in the British Museum.

Genus EUSTALIDA.

Eustalida, Faust, Stett, Ent. Zeit. 1891, p. 264.
Menostoma, Desbrochers des Loges, C. R. Ent. Soc. Belg. 1891, p. ccclvi.

TYPE, *Eustalida bomfordi*, Faust.

Characters as in *Dermatoxenus*, Mshl., with the following exceptions:—

Head not impressed, nor constricted behind the eyes, the forehead with only a short faint stria. *Rostrum* separated from the head by an angulated furrow, the scrobes longer, shallow behind and curving to the lower margin of the eye, the epistome more deeply emarginate and with its anterior angles sharply projecting forwards, the mentum filling the buccal cavity. *Antennæ* inserted before the middle of the rostrum, the scape reaching the middle of the eye, the funicle with joint 2 much longer than 1, the club with joint 1 much longer than 2. *Scutellum* invisible. *Sternum* with the anterior coxæ rather nearer the front margin of the prosternum, the episterna of the metasternum broad. *Venter* with segment 1 separated from 2 by a sinuate incision. *Legs* more slender and elongate, the corbels of the hind tibiæ without scaling internally, all the tibiæ with a long sharp internal spine at the apex.

Range. Northern India.

25. Eustalida bomfordi, *Fst.*

Eustalida bomfordi, Faust,* Stett. Ent. Zeit. 1891, p. 264.
Menostoma cardoni, Desbrochers des Loges, C. R. Ent. Soc. Belg. 1891, p. ccclvi.

Colour black, with uniform dense glittering metallic green scaling above and below.

Head nearly as long as broad, the space between the eye and the prothorax equal to the length of the eye, the forehead with a short fine stria. *Rostrum* comparatively long and slender, parallel-sided in the basal half, the genæ roundly dilated, the anterior projections of the epistome very sharp, the upper surface with a broad shallow longitudinal impression, the dorsal edges rounded, the sculpturing hidden by the scaling. *Antennæ* comparatively slender, the scape abruptly clavate, the funicle with joint 2 much longer than 1, 3 almost as long as 1 and longer than the remainder. *Prothorax* very slightly broader than long, the sides gently rounded, broadest about the middle, the base rounded, the apex narrower and vertically truncate at the sides, the upper surface rugulose, with a transverse impression near the apex and a complete narrow central stria. *Elytra* separately rounded at the base, the shoulders forming a rounded obtuse angle, the sides subparallel in the ♂, broader and more rounded in the ♀, the striæ with rows of large rather shallow punctures, the suture and the alternate intervals more raised, the setæ sparse, very short, curved and subdepressed. *Legs* with dense green scaling, with orange yellow setæ at the apex of the tibiæ, the second joint of the hind tarsi longer than broad.

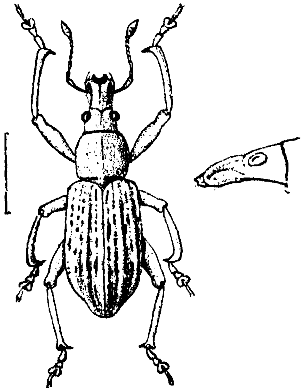

Fig. 20.—*Eustalida bomfordi*, Fst.

Length, ♂ 7½, ♀ 8½ mm.; breadth, ♂ 3, ♀ 4½ mm.

Sikkim: Mungphu (*E. T. Atkinson*); Sandakphu, 12,000 ft., Darjiling dist. (*C. W. Beebe*—Ind. Mus.; *H. Stevens*); Kurseong (*Cardon*). Bengal: Calcutta (*Dr. Bomford*—*teste* Faust).

Type in the Dresden Museum; type of *E. cardoni* not traced.

The locality given by Faust for the type, namely, Calcutta, appears to be dubious.

Group V. TANYMECIDES.

This is the only group of the Brachyderinæ that is well represented in the Indian fauna, and more genera and species are known from this subregion than from any equal area in other parts of the world. Moreover, their numbers are likely to be much increased when the beetles of the Himalayas have been properly collected, for numerous localised species of the wingless section, such as *Leptomias* and its allies, are certain to be found there.

With one or two exceptions, the early stages are quite unknown, and but little has been recorded as to the habits of the adults of the Indian species, apart from a few *Astycus* and *Tanymecus* which are injurious to cultivated plants.

Key to the Genera.

1 (2) Tarsi with only a single claw. ATMETONYCHUS, Schh., p. 112.
2 (1) Tarsi with two claws.
3 (14) Tarsal claws free.
4 (5) Basal margin of the prothorax broader than that of the elytra .... HADRONOTUS, Fst., p. 62.
5 (4) Basal margin of the prothorax not broader than that of the elytra.
6 (7) Mesosternal process between the median coxæ almost as broad as the coxæ; intercoxal process of venter truncate and broader than the hind coxæ; third joint of hind tarsi not broader than second ANEMEROIDES, g. n., p. 110.
7 (6) Mesosternal process much narrower than the coxæ; intercoxal process of venter rounded or subangulate and narrower than the hind coxæ; third joint of hind tarsi broader than second.
8 (11) Corbels of hind tibiæ narrowly ascending the dorsal edge of the tibia for some distance, and fringed outwardly with a row of erect setæ.
9 (10) Corbels of hind tibiæ bare.... TANYMECUS, Schh., p. 68.
10 (9) Corbels of hind tibiæ clothed with scaling .... PHACEPHORUS, Schh., p. 107.
11 (8) Corbels of hind tibiæ terminal and not ascending the dorsal edge.
12 (13) Base of rostrum not broader than the forehead; scape reaching only the middle of the eye; elytra without a humeral callus, the shoulders rounded.................. SCEPTICUS, Roel., p. 63.
13 (12) Base of rostrum broader than the forehead; scape reaching the posterior margin of the eye; elytra with a distinct humeral callus, the shoulders oblique .... ACROCŒLOPUS, g. n., p. 66.
14 (3) Tarsal claws fused together at the base.
15 (24) Corbels of hind tibiæ at least partly clothed with scales.
16 (17) Tarsi sublinear, the hind pair with joint 3 not or but little broader than 2; the forehead

produced laterally so as partly to conceal the eyes from above .... Anemerus, Schh., p. 113.

17 (16) Tarsi broad, the hind pair with joint 3 evidently broader than 2; forehead not produced laterally over the eyes.

18 (21) Pronotum not transversely impressed; basal margin of elytra slightly raised; corbels of hind tibiæ not ascending the dorsal edge; scales of elytra each with a raised boss in the middle.

19 (20) Elytra with distinct shoulders Lepidospyris, g. n., p. 153.

20 (19) Elytra without shoulders .... Tylopholis, g. n., p. 156.

21 (18) Pronotum with a transverse impression; base of elytra not raised; corbels of hind tibiæ ascending the dorsal edge; scales simple.

22 (23) Prosternum with a bifid prominence behind the front coxæ; trochanters with a single long erect bristle; antennal club with the two basal joints equal .... Hypomeces, Schh., p. 115.

23 (22) Prosternum without any bifid process; trochanters without an erect bristle; antennal club with joint 2 longer than 1 ... . Dereodus, Schh., p. 118.

24 (15) Corbels of hind tibiæ entirely bare.

25 (30) Elytra with distinct shoulders, the lateral edges emarginate near the base to receive the head of the metepisternum.

26 (27) Hind corbels not enclosed; pronotum transversely impressed .... Dyscheres, Pasc., p. 125.

27 (26) Hind corbels broadly enclosed; pronotum not transversely impressed.

28 (29) Hind corbels narrowly ascending the dorsal edge of the tibia for some distance; basal margin of elytra not raised .... Polycleis, Schh., p. 127.

29 (28) Hind corbels not or very slightly ascending the dorsal edge of the tibia; basal margin of elytra narrowly elevated .... Astycus, Schh., p. 128.

30 (25) Elytra without projecting shoulders,* the lateral edges not emarginate near the base.

31 (38) The episternal suture of the metasternum distinct throughout.

32 (35) Base of elytra abruptly marginate.

33 (34) Rostrum with a longitudinal impression along the dorsal margin; submentum not pedunculate; mentum with two setæ .... Sympiezomias, Fst., p. 159.

34 (33) Rostrum without such an impression; submentum with a very short peduncle; mentum with four or six setæ ...... Leptomias, Fst., p. 172.

35 (32) Base of elytra not abruptly marginate, but sloping gradually to the junction with the mesonotum.

36 (37) Corbels of hind tibiæ broadly enclosed; rostrum without an impression in front of the eye..................... Xylinophorus, Fst., p. 191.

37 (36) Corbels of hind tibiæ open; rostrum with a deep impression in front of the eye .... Hyperomias, g. n., p. 194.

38 (31) The episterna fused posteriorly with the metasternum.

39 (40) Scape reaching only the middle of the eye; corbels of hind tibiæ broadly enclosed; ♂ with the median coxæ and hind tibiæ normal .... Geotragus, Schh., p. 196.

40 (39) Scape reaching the hind margin of the eye; corbels of hind tibiæ not or very narrowly enclosed; ♂ with the median coxæ produced into a tubercle or laminate process, the hind tibiæ curved or sharply bent at the apex.

41 (42) Basal margin of elytra narrowly elevated............ Pachynotus, Redt., p. 201.

42 (41) Basal margin of elytra not elevated .... Achlænomus, Wtsh., p. 202.

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* In some species of *Sympiezomias* there is a small angular projection close to the base of the elytra, but this is merely an external process, and not a shoulder in the sense here indicated. A true shoulder is accompanied by a corresponding indentation on the lower surface of the elytra, which serves to accommodate the base of the wing, and its presence may be taken as a fairly reliable indication of the occurrence of functional wings. In *Sympiezomias* these organs are quite rudimentary.

Genus **HADRONOTUS.**

Hadronotus, Faust, Deut. Ent. Zeit. 1886, p. 342; id., op. cit. 1897, p. 344.

TYPE, *Hadronotus adstringatus*, Gyl. (West Africa).

"Distinguished from the genus *Siderodactylus* [African] by the total absence of shoulders to the elytra, in that joint 7 of the funicle is not broader than 6, the lower margin of the scrobes is directed towards the lower margin of the eye, and the anterior coxæ of the ♀ are contiguous.

"Tarsal claws free, front tibiæ much longer than the two posterior pairs, the corbels of the hind tibiæ open and ascending the dorsal edge. Elytra with stria 9 ceasing at some distance from the elevated basal margin, but parallel with 10. Scrobes dilated behind, flattened and with the upper edge reaching the middle of the elongate oval eye; an additional lateral furrow above the scrobe. The scape exceeds the anterior margin of the eye. Prosternum with the gular margin sinuate, the anterior coxæ nearer to the front margin."

Range. Northern India.

26. **Hadronotus viridulus**, *Fst.*

Hadronotus viridulus, Faust, Deut. Ent. Zeit. 1886, p. 343.

"Elongate, black, rather shiny, with green scaling above, and greyish white with a silvery reflexion on the sides and underparts; antennæ testaceous, except the club; rostrum continuous with the head but narrowed in front, plane and with a central furrow which is continued on the head; prothorax a little broader than long, truncate at the base and apex, the base narrowly marginate, the disk with a central furrow; scutellum very small; elytra with the base narrower than that of the prothorax, truncate and with a raised margin, the sides rounded, roundly acuminate behind, obsoletely punctato-striate, stria 10 more deeply impressed at the base, the intervals plane and coriaceous, the 8th [9th] a little elevated at the apex; front femora of the ♀ thickened, the front tibiæ straight, their internal edge with acute granules.

"Forehead rather convex; rostrum flat, a little longer than its width at the base, one-third narrower at the apex, with a short longitudinal carina on each side of the middle, with a small furrow in front of the eye and above the scrobe extending for half the length of the rostrum. The funicle with joint 2 as long as broad and half as long as 1, the rest globular. Thorax with the sides almost straight, slightly constricted near the anterior margin, so that this appears only a little narrower than the base; the central furrow extends from the base of the thorax to the apex of the rostrum, and is only interrupted for a short distance at the anterior margin of the thorax. Elytra broadest in the middle and here scarcely broader than the thorax, the elevated basal margin distinctly narrower than the base of the thorax, very sloping behind and only steeply declivous right at the apex, the apex itself apparently produced downwards owing to a sinuation in the lateral margin just before it; stria 8 abbreviated at some distance from the base and 9 just behind the median coxæ. The anal segment with an oblique impressed line on each side at the base.

"I have only one ♀ before me. The insect presents a very characteristic appearance on account of the hind margin of the thorax being broader than the base of the elytra."

Length, 6 mm.; breadth, 1·7 mm.

SIKKIM: Darjiling.

Type in the Dresden Museum.

I have not seen the unique specimen of this evidently very distinct species, and the above is a translation of Faust's description.

Genus **SCEPTICUS.**

Scepticus, Roeloffs, Ann. Soc. Ent. Belgique, 1873, p. 158.

TYPE, *Scepticus insularis*, Roeloffs (Japan).

Head with the eyes quite lateral, almost circular and prominent, forehead as broad as the base of the rostrum. *Rostrum* deflected, longer than the head and continuous with it, very slightly emarginate at the apex; the scrobes broad and deep, scarcely dilated and curving downwards close beneath the eye; mandibles rather prominent, the scar projecting. *Antennæ* with the scape cylindrical, clavate and reaching the middle of the eye; the funicle with the two basal joints more elongate, 3–6 subequal and bead-like, 7 larger and subconical, the club ovate and 4-jointed, the first joint much longer than the second. *Prothorax* truncate at the base and apex, the latter narrower, the sides rounded, the gular margin distinctly sinuate, the coxæ slightly nearer the front margin of the prosternum. *Scutellum* very small. *Elytra* marginate at the base, the margin scarcely raised, the shoulders sloping and without a humeral prominence, the lateral margin scarcely or very shallowly sinuate. *Sternum* with the epimera of the mesosternum much smaller than their episterna, and scarcely separating them from the base of the elytra; the metasternum slightly shorter than the median coxæ, the episterna fused with it so that no suture is visible, the episterna themselves mostly hidden beneath the elytra, but with the dilated anterior piece exposed and distinct, the hind coxæ reaching the elytra. *Venter* with the intercoxal piece truncate and about as broad as the coxæ, segment 2 longer than 3+4 and separated from 1 by a curved suture of even depth. *Legs* moderate, the femora slightly clavate, the front pair not thickened; the front tibiæ only slightly curved and not denticulate, the hind pair straight, with its corbels large, triangularly dilated, narrowly enclosed, slightly ascending the dorsal edge and without any scaling on their internal surface; the tarsi with the third joint evidently broader than the second, the claws free.

Range. Kashmir, Turkestan and Japan.

Roeloffs placed this genus in the BRACHYDERIDES, but his type species, from Japan, has well developed postocular vibrissæ, and should undoubtedly be referred to the TANYMECIDES, in the vicinity of *Thylacites*, to which it is closely allied. The latter genus differs in having the base of the elytron gradually sloping to its edge, instead of being sharply marginate; the metasternum is evidently longer than the median coxæ; the corbels of the posterior tibiæ are covered with scaling internally, and the third joint of the posterior tarsi is scarcely broader than the second. The two species of *Thylacites* described by Faust from Kashmir should, I consider, be referred to the present genus, which has hitherto been regarded as peculiar to Japan.

Key to the Species.

1 (6) Rostrum without a transverse impressed line before the eye.
2 (5) Prothorax with a central furrow.
3 (4) Elytra truncate at the base and broader than the prothorax, broadest at or before the middle .... *noxius*, Fst., p. 64.
4 (3) Elytra jointly sinuate at the base, broadest far behind the middle.... *nubifer*, Fst., p. 65.
5 (2) Prothorax without a central furrow . *cæsius*, sp. n., p. 65.
6 (1) Rostrum with a transverse impressed line in front of the eye .... *kashmirensis*, sp. n., p. 65.

27. **Scepticus noxius**, *Fst.*

Thylacites noxius, Faust,* Stett. Ent. Zeit. 1886, p. 130.

Colour black, with uniform grey scaling.

Head with scattered punctation, the rostral furrow encroaching only on the anterior part of the forehead. *Rostrum* dilated at the apex, plane above, rugosely punctate and with a deep central furrow in the basal half. *Prothorax* a little broader than long, the sides subparallel near the base, slightly rounded in front, broadest before the middle, the apex scarcely narrower than the base, with coarse scattered punctures above, except along the anterior margin, and with a deep central furrow which does not reach the apex. *Elytra* broadly ovate, broadest at or before the middle, with shallow but distinctly punctured striæ, the intervals broad and almost plane, the setæ fine, very short and subdepressed on the disk, longer and more prominent on the declivity.

Length, 5–5¾ mm.; breadth, 2½–2¾ mm.

KASHMIR: Sirikol (*Stoliczka*). TURKESTAN.

Type in the Dresden Museum.

28. **Scepticus nubifer**, *Fst.*

Thylacites nubifer, Faust,* Stett. Ent. Zeit. 1886, p. 131.

Colour black, with variegated grey and brown scaling.

Closely allied to *T. noxius*, Faust, but distinguished by the following points. *Head* with the central furrow ascending to the vertex. *Prothorax* with the sides much more strongly rounded in the anterior half, the punctation finer and less distinct, the central furrow narrow and shallow. *Elytra* more elongate, comparatively narrow at the shoulders and broadest far behind the middle.

Length, 5½ mm.; breadth 2¼ mm.

KASHMIR: Dras, Kargil and Leh (*Stoliczka*—Ind. Mus.).

Type in the Dresden Museum.

29. **Scepticus cæsius**, sp. nov.

Colour black, with uniform dense bluish-grey scaling.

Head with scattered punctures and a fine central stria, almost concealed by the scaling. *Rostrum* as long as broad, broadest at the base, narrowed to the middle and thence slightly dilated to the apex, the upper surface almost flat, with a very shallow central furrow in the basal half. *Antennæ* red-brown, the funicle with joint 1 thicker and slightly longer than 2, 3–6 subequal and bead-like, 7 much larger. *Prothorax* as long as broad, the sides moderately rounded, broadest before the middle, with a very faint subapical constriction, the base slightly broader than the apex and marginate laterally; the upper surface uneven, rugosely punctate, without any trace of a central furrow, the sculpturing partly concealed by the scaling. *Scutellum* rudimentary. *Elytra* broadly ovate, shaped as in *S. noxius*, broadest about the middle, the shoulders rounded, jointly sinuate at the base, the apices separately rounded; the striæ rather broad and shallow, with remote punctures, the intervals broad and flat, roughened with small low granules and set with short stiff setæ, which are shorter and curved on the disk, and a little longer and more erect behind.

Length, 5½ mm.; breadth, 2½ mm.

KASHMIR: Gilgit, 5000 ft. (*Col. G. M. Giles*).

Type ♀ in the Indian Museum.

Very similar to *S. noxius*, Fst., but the apical portion of the rostrum is more sloping and the central furrow much more shallow; the scape is longer; the prothorax has no central furrow and its base is more distinctly marginate; the elytra are sinuate at the base and more evidently marginate, the striæ are shallower, the dorsal intervals rather broader and flatter, and the setæ are much stouter.

30. **Scepticus kashmirensis**, sp. nov.

Colour black, with uniform dense brown scaling, having a slight metallic reflexion at the apex of the rostrum.

Head with fine very shallow punctation, hidden by the scaling, the forehead with a short deep central furrow. *Rostrum* gradually dilated from base to apex, with a transverse impressed line just in front of the eye, shallowly impressed towards the apex, plane and with a deep central furrow in the basal half. *Antennæ* piceous, the funicle with the two basal joints subequal. *Prothorax* as long as broad, the sides rounded, broader rather before the middle, rugosely punctate above, but the sculpturing almost hidden beneath the dense scaling, and with a shallow central furrow from the base to near the apex. *Elytra* ovate, the striæ with large deep punctures which are partly hidden by the scaling, the intervals broad and plane in the ♀, a good deal narrower in the ♂, the setæ short and depressed.

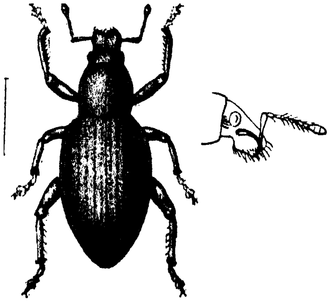

Fig. 21.—*Scepticus kashmirensis*, Mshl.

Length, 6½–8 mm.; breadth 3¼–4 mm.

Kashmir: (*Col. Seathun*—type); Sonamarg, 8600 ft. (*T. R. D. Bell*).

Type ♂ in the British Museum.

Genus **ACROCŒLOPUS**, nov.

Type, *Acrocœlopus cretaceus*, sp. nov.

Head with the eyes lateral and very convex, the forehead narrower than the base of the rostrum. *Rostrum* longer than broad, with a very shallow apical emargination; the scrobes deep, sublinear, deflected at some distance in front of the eyes and visible from above at the apex; the mandibles rather sharply pointed at the apex, their inner edges simple, the mandibular scar distinct; the mentum large, the submentum not pedunculate. *Antennæ* inserted before the middle of the rostrum, the scape straight, gradually thickened to the apex and reaching the hind margin of the eye; the funicle with joint 1 longer than 2, the remainder subequal and slightly transverse, the club ovate and 4-jointed. *Prothorax* as in *Tanymecus*. *Scutellum* small. *Elytra* with a rounded humeral prominence, jointly and deeply sinuate at the base, the external angles projecting forwards, punctato-striate, mucronate at the apex and with the lateral margins not sinuate. *Sternum* as in *Tanymecus*, but with the metasternum longer than the median coxæ and its episterna narrower. *Venter* with the intercoxal process subangulate and much narrower than the coxæ, segment 2 scarcely longer than 3+4, the apical segment of the ♀ simple but slightly more pointed than that of the ♂. *Legs* moderately long, the tibiæ curved inwards at the apex, the corbels of the posterior pairs open and terminal, not ascending the dorsal edge; tarsi broad, joint 2 shorter and a little narrower than 1, 3 broadly lobate, the claws free.

Range. Bengal.

31. **Acrocœlopus cretaceus**, sp. nov.

Colour black, with uniform dense chalky grey scaling.

Head subconical, the forehead plane and finely rugose, the eyes short ovate and very prominent. *Rostrum* longer than broad, a little narrower at apex than at base, with a broad central furrow containing a low carina. *Prothorax* as long as broad, the sides slightly rounded, broadest before middle, narrower at apex than at base, slightly depressed on the disk, finely rugose (hidden by the scaling), with an oblique impressed line on each side behind the middle and with faint curved lines laterally. *Elytra* ovate, acuminate behind and with a short mucro, the shoulders prominent in the ♀, much more sloping in the ♂, with deep strongly punctured striæ, the intervals broader than the striæ and slightly convex, stria 9 with a very large round and deep fovea in the ♀ only; scaling very dense, the setæ very short and depressed. *Legs* with all the tibiæ finely denticulate internally in both sexes, the tibiæ more curved in the ♂ than in the ♀.

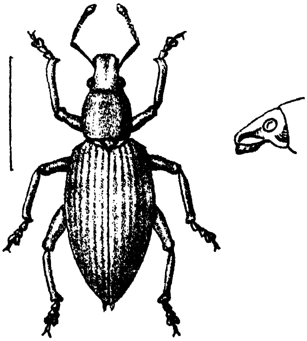

Fig. 22.—*Acrocœlopus cretaceus*, Mshl.

Length, ♂ 12, ♀ 10½ mm.; breadth, ♂ 5¼, ♀ 4¾ mm.

BENGAL.

Types, ♂ in the British Museum, ♀ in the Oxford Museum.

Genus TANYMECUS.

Tanymecus, Schönherr, Disp. Meth. 1826, p. 127.
Asemus, Schönherr, op. cit. p. 129 (nom. præocc.).—Type, *A. circumdatus*, Wied. var. *rusticus*, Gyl.
Esamus, Chevrolat, Ann. Soc. Ent. France, 1880, p. 255 (nom. nov. for *Asemus*, Schh.).
Cercophorus, Chevrolat, op. cit. p. 259.—Type, *Macropterus verlorenii*, Voll.

TYPE, *Curculio palliatus*, F. (Europe).

Head with the eyes lateral and variable in shape. *Rostrum* varying in length, the base not or only slightly broader than the forehead, the sides straight, the apical emargination variable; the scrobes varying in structure; the mandibles with a distinct depressed scar; the mentum of variable shape, the submentum not pedunculate. *Antennæ* inserted at the middle or before the middle of the rostrum, the scape gradually thickened or rather abruptly clavate, reaching at least the middle of the eye, but usually exceeding the hind margin; the funicle with the two basal joints more elongate, 3–7 subequal, varying from slightly transverse to longer than broad, the club elongate acuminate and 4-jointed. *Prothorax* truncate or slightly rounded at the base, truncate at the apex and with distinct vibrissæ, the gular margin usually with a shallow sinuation. *Scutellum* distinct, triangular. *Elytra* variable in shape, truncate or sinuate at the base, with a humeral callus, the shoulders generally well developed, but sometimes very oblique and only slightly broader than the prothorax, the lateral margin very shallowly sinuate above the hind coxæ and with a small emargination near the base. *Sternum* with the front coxæ much nearer the anterior margin of the prosternum; the mesosternum with the epimera large; the metasternum as long as or longer than the median coxæ, the episterna broad and distinct, the hind coxæ not reaching the elytra. *Venter* with the intercoxal process rounded or angulate and much narrower than the hind coxæ, segment 2 as long as or longer than 3+4 (except in *T. konbiranus*, Mshl., and a few African species) and separated from 1 by a curved incision, which is usually fainter in the middle. *Legs* elongate and slender, the femora moderately clavate; the tibiæ almost straight externally, often denticulate internally, the two anterior pairs with the internal apical angle produced, the two posterior pairs with their corbels open and narrowly ascending the dorsal edge for some distance and fringed with short setæ; the tarsi generally slender, the claws long and free.

Range. North America, Europe, Africa, Central Asia, British India, Siam, and Malay States.

Faust has always kept *Esamus* and *Tanymecus* as distinct genera, giving as diagnostic characters certain differences in the dilatation and direction of the scrobes, in the relative lengths of the ventral segments, in the emargination of the apex of the rostrum and the shape of the elytra; and he confines the name

Tanymecus to the species having the facies of *T. indicus*, Fst. But after examining a large number of species from all parts of their range, I find that every one of these characters is liable to such serious exceptions that it is impossible to accept them as of generic value.

India would appear to be the head-quarters of the genus, as at present known, and no fewer than 43 species are here recorded from within our limits. These weevils in the adult stage frequent shrubs and low-growing plants, and their colouring is for the most part confined to greys and browns, though in a few species, such as *T. hercules*, *T. verlorenii*, *T. chevrolati*, and *T. princeps*, the scaling is of a uniform metallic green colour. In the very few cases in which the full life-history is known the larvæ are subterranean root feeders.

The sexes differ but little in general form, though well-marked distinctions are usually to be found on the ventral surface of the female. In most species the last segment of the venter, which is always more pointed in the female, bears on each side a narrow bare raised line on the basal half, while in many cases its apex is more or less strongly compressed, sometimes forming quite a sharp ridge; in *T. andrewesi* the third segment is deeply impressed and partly withdrawn beneath the second, while in *T. pertusiventris* the same segment has a deep round impression on each side. In *T. versicolor* an unusual sexual difference may be observed, namely, the presence of a long curved spur at the apex of the middle tibiæ in the female only.

Tanymecus rudis, which was described by Gyllenhal as coming from India, proves to be an African species.

Key to the Species.

1 (88) Mandibles projecting beyond the genæ.
2 (85) Sides of metasternum without an impressed lateral line; middle tibiæ of ♂ not clothed with long hairs on the external edge; femora of ♂ not thicker than those of ♀.
3 (58) First joint of funicle not longer than second.
4 (5) Eyes almost flat; rostrum very deeply excised at the apex.... *chloroleucus*, Wied., p. 75.
5 (4) Eyes prominent; rostrum not or shallowly excised at apex (except *lentus*).
6 (17) Second joint of funicle longer than first.
7 (14) Rostrum very short, broader than long; anal segment of ♀ not laterally compressed or acuminate at apex.

8 (13) Scape not reaching hind margin of eye; hind tibiæ of ♂ denticulate.

9 (12) The space between the eye and scrobe not broader than the scape, shiny and devoid of scales in the middle; prothorax without a central carina; colour grey or brown.

10 (11) Second joint of funicle nearly twice as long as first; colour uniform grey above, with the scutellum conspicuously paler . *sciurus*, Oliv., p. 76.

11 (10) Second joint of funicle only slightly longer than first; colour brownish, the alternate intervals of the elytra paler; scutellum not paler than the suture *cephalotes*, Fst., p. 78.

12 (9) The space between the eye and scrobe broader than the scape and densely squamose throughout; prothorax with a fine abbreviated central carina; colour pale green or bluish .... *chevrolati*, Fhs., p. 79.

13 (8) Scape reaching posterior margin of eye; hind tibiæ of ♂ not denticulate .... *burmanus*, sp. n., p. 80.

14 (7) Rostrum not broader than long; anal segment of ♀ laterally compressed and sharply pointed at apex.

15 (16) Rostrum very deeply emarginate at apex; prothorax broader than long; ♀ with the third ventral segment and margin of elytra normal .... *lentus*, Fst., p. 86.

16 (15) Rostrum shallowly emarginate at apex; prothorax a little longer than broad; ♀ with third ventral segment deeply impressed and retracted beneath second, and with margin of elytra dilated close to apex .... *andrewesi*, Fst., p. 80.

17 (6) Second joint of funicle not longer than first.

18 (53) Scape, when in the position of rest, reaching or exceeding the hind margin of eye; form more robust; second joint of hind tarsi not or very slightly longer than third.

19 (40) Elytra without any well-defined pale lateral stripe.

20 (33) Left mandible with a sharp tooth and with a dorsal subapical transverse impressed line.

21 (22) Apical margin of second ventral

segment angulate externally; ♀ with a very deep round lateral impression at each side of third segment .... *pertusiventris*, Fst., p. 81.

22 (21) Apical margin of second ventral segment truncate laterally; ♀ without ventral impressions.

23 (28) Rostrum with a distinct central carina.

24 (25) Colour metallic green; ♂ with a long pencil of orange hairs at apex of elytra .... *hercules*, Desbr., p. 82.

25 (24) Colour dull brown or grey brown; ♂ without pencil of hairs.

26 (27) Elytra strongly narrowed from shoulders to apex; scutellum not paler than elytra; hind tibiæ of ♂ not denticulate internally.................... *obscurus*, sp. n., p. 83.

27 (26) Elytra gradually narrowed behind, more obtuse posteriorly; scutellum paler than elytra; hind tibiæ of ♂ denticulate internally.................... *simplex*, sp. n., p. 83.

28 (23) Rostrum without a distinct carina.

29 (32) Legs black; anal segment of ♀ compressed to a point at apex.

30 (31) Tibiæ not denticulate internally; prothorax as long as broad; punctures on elytra large and deep .... *xanthurus*, Chev., p. 84.

31 (30) Tibiæ denticulate; prothorax a little longer than broad; punctation on elytra finer .... *mixtus*, Fst., p. 84.

32 (29) Legs reddish, the front tibiæ not or scarcely denticulate; anal segment of ♀ rounded at apex. *marginalis*, Gyl., p. 85.

33 (20) Left mandible with its edge truncate or rounded, and with a dorsal transverse impressed line.

34 (35) Prothorax narrower at base than at apex; elytra rounded behind; antennal club compact and ovate .... *arenaceus*, sp. n., p. 86.

35 (34) Prothorax not narrower at base than at apex; elytra acuminate behind; antennal club rather loose and narrowly elongate.

36 (39) Scape reaching the posterior margin of eye; prothorax much narrower at apex than at base; shoulders sloping.

37 (38) Striæ 1–3 not broader or deeper at apex than on disk; apices of elytra not divergent in ♂ .... *lentus*, Fst., p. 86.

38 (37) Striæ 1–3 much broader and

deeper at apex than on disk; apices of elytra divergent in ♂. *piger*, sp. n., p. 87.

39 (36) Scape exceeding the posterior margin of eye: prothorax scarcely narrower at apex than at base; shoulders roundly prominent .... *deceptor*, sp. n., p. 87.

40 (19) Elytra with a well-defined pale lateral stripe.

41 (42) Legs reddish; anal segment of ♀ rounded and not compressed at apex .... *marginalis*, Gyl., p. 85.

42 (41) Legs black; anal segment of ♀ laterally compressed into a point at apex.

43 (44) Prothorax very slightly narrower at apex than at base; mesosternum with the intercoxal process about one-third the width of the lateral piece adjoining the coxæ externally; elytra dark brown, with a pure white lateral stripe which does not reach the margin .... *lefroyi*, sp. n., p. 88.

44 (43) Prothorax distinctly narrower at apex than at base; intercoxal process of mesosternum only slightly narrower than the lateral piece.

45 (46) Elytra with the lateral pale stripe very sharply defined externally and not reaching the margin; rostrum with a median impressed line and no carina; eyes very prominent .... *lacordairei*, Fst., p. 89.

46 (45) Elytra with the lateral stripe extending to the margin, or else merging gradually into the darker margin; rostrum with a distinct central carina and the eyes prominent, or rostrum with the carina indistinct and the eyes subdepressed.

47 (48) Rostrum with the central carina indistinct; eyes subdepressed.. *albomarginatus*, Gyl., p. 91.

48 (47) Rostrum distinctly carinate; eyes prominent.

49 (50) Prothorax with three subdenuded stripes; elytra usually pinkish fawn or greenish with a slight metallic reflexion and with stripes of denser and thinner scaling; ♂ organ with the lateral margins not elevated into carinæ, the dorsal outline almost straight.............. *circumdatus*, Wied., p. 90.

50 (49) Prothorax without subdenuded stripes; elytra with almost uniform thin grey scaling on the disk; ♂ organ with the lateral margins carinate about the middle, the dorsal outline deeply sinuate.

51 (52) Hind tibiæ of ♂ strongly denticulate; anal segment of ♀ without an apical fovea ...... *propinquus*, Fst., p. 92.

52 (51) Hind tibiæ of ♂ not denticulate; anal segment of ♀ with an elongate apical fovea .... *innocuus*, Fst., p. 93.

53 (18) Scape, when in the position of rest, not reaching the hind margin of eye; form narrow and elongate; second joint of hind tarsi longer than third; anal segment of ♀ not compressed.

54 (55) Middle tibiæ of ♀ with a long curved apical spur, as long as the second joint of the tarsus; ♂ organ not carinate dorsally, but with a longitudinal furrow. *versicolor*, sp. n., p. 93.

55 (54) Middle tibiæ of ♀ with the apical spur short and bent sharply inwards at a right angle to the tibiæ; ♂ organ not sulcate, but with a sharp dorsal carina.

56 (57) Elytra with a pale greenish or whitish lateral stripe; scales short and broad, the setæ absolutely recumbent............ *longulus*, Fhs., p. 94.

57 (56) Elytra without a paler lateral stripe; scales much longer and narrower, the setæ longer and obliquely raised .... *feæ*, Fst., p. 95.

58 (3) First joint of funicle longer than second.

59 (60) Apex of elytra in ♂ produced into a well-marked process bearing a tuft of hairs; ♀ with the anal segment as long as its basal width and strongly compressed at apex so as to form a sharp carina .... *xanthurus*, Chev., p. 84.

60 (59) Elytra of ♂ without a tufted apical process, the apices of elytra forming short diverging points in both sexes; anal segment of ♀ broader than long and not compressed at apex.

61 (62) The mandibular scars extremely prominent, forming two divergent processes; rostrum without a carina; joint 2 of hind

tarsi much longer than 3, which is narrow .... *mandibularis*, sp. n., p. 96.

62 (61) The mandibular scars not raised on projecting processes; third joint of hind tarsi as broad as usual.

63 (66) Rostrum without a central carina.

64 (65) Hind tarsi with joint 2 longer than 3; body with more or less green scaling; upper surface with recumbent inconspicuous setæ; anterior margin of pronotum not projecting over the head .... *princeps*, Fst., p. 97.
iracundus, Fst., p. 97.

65 (64) Hind tarsi with joints 2 and 3 subequal; body without green scaling; upper surface with short dense suberect setæ; anterior margin of pronotum projecting strongly over the head. *hispidus*, sp. n., p. 98.

66 (63) Rostrum with a distinct central carina.

67 (76) Scape of antennæ not exceeding the posterior margin of eye.

68 (69) Rostrum shorter than its width at base .... *seclusus*, Fst., p. 100.

69 (68) Rostrum not shorter than its width at base.

70 (71) Head and rostrum with dense, obliquely raised white setæ; prothorax evidently narrower at apex than at base; scaling green .... *hirticeps*, sp. n., p. 98.

71 (70) Head and rostrum with recumbent setæ: prothorax not or scarcely narrower at apex than at base: scaling brown or grey.

72 (73) Eyes shorter and more prominent, evidently shorter than the rostrum; scales broader and coarser; scrobes narrower and bare; ♂ organ terminating in a sharp point................ *tetricus*, Fst., p. 101.

73 (72) Eyes longer and less prominent, almost as long as the rostrum; scales narrower and finer; scrobes broader and clothed with scaling posteriorly.

74 (75) Prothorax not constricted near apex and with only a trace of a central carina on the anterior half; ♂ organ broadly rounded at apex .... *indicus*, Fst., p. 99.

75 (74) Prothorax with a shallow constriction near apex and with a complete obtuse central carina. *versutus*, Fst., p. 101.

76 (67) Scape of antennæ exceeding the posterior margin of the eye.

77 (84) Elytra with the setæ minute and depressed; last ventral segment of ♂ rounded at the apex.

78 (83) Venter with segment 2 evidently longer than 3 and 4 together.

79 (82) Rostrum not dilated at the apex, its dorsal surface flat.

80 (81) Coxæ and femora without a fringe of long hairs; elytra of ♀ without sharp apical processes .... *parvus*, Desbr., p. 101.

81 (80) Coxæ and femora with a fringe of long hairs; elytra of ♀ each with a short sharp apical process *curviscapus*, sp. n., p. 102.

82 (79) Rostrum evidently dilated at the apex and rather deeply impressed above .... *modicus*, sp. n., 103.

83 (78) Venter with segment 2 shorter than 3 and 4 together........ *konbiranus*, sp. n., p. 104.

84 (77) Elytra with comparatively long erect setæ; last ventral segment of ♂ bisinuate at the apex .... *agrestis*, Fst., p. 104.

85 (2) Sides of metasternum with a longitudinal impressed line; middle tibiæ of ♂ with long hairs on the external edge; femora of ♂ thicker than those of ♀.

86 (87) Elytra of ♂ with a very long apical mucro bearing a tuft of long hairs, those of ♀ with the apices sharply pointed; scaling dull green.................. *verlorenii*, Voll., p. 106.

87 (86) Elytra of ♂ not mucronate at the apex, merely with a tuft of short hairs; those of ♀ with the apices separately rounded; green scaling shiny.......... *chloritis*, Fst., p. 107.

88 (1) Mandibles not projecting beyond the genæ; rostrum deeply emarginate at apex; eyes very prominent, the scape reaching their posterior margin........ *lectus*, sp. n., p. 105.

32. Tanymecus chloroleucus, *Wied.* (fig. 24, *c*).

Curculio chloroleucus, Wiedemann,* Zool. Mag. i, pt. 3, 1819, p. 176.
Tanymecus chloroleucus, Gyllenhal, Schönh. Gen. Curc. ii, 1834, p. 79.

Colour cretaceous white, often with a greenish tinge, the sides of the prothorax usually orange-yellow and the sutural region of the elytra with a diffused yellowish tint. Dried specimens often much discoloured.

Eyes almost circular, strongly depressed as compared with other species of the genus. *Rostrum* very deeply and triangularly excised at the apex, the central and lateral carinæ very distinct; mandibles massive and roundly prominent, the left one truncate internally and without any transverse dorsal impression. *Antennæ* with the scape reaching or exceeding the posterior margin of the eye, the funicle with joint 2 very slightly longer than 1. *Prothorax* as long as broad, gradually narrowed from base to apex, the basal margin faintly bisinuate, with fine shallow and close, but not confluent, punctation, the scaling thinner along the faint and abbreviated central carina. *Elytra* similar in the two sexes, comparatively broad, roundly narrowed behind, the shoulders sloping, the apices having a very short separate mucro, with very fine and shallowly punctured striæ, the juxta-sutural ones deeper at apex; scaling very dense throughout and mingled with dense recumbent setæ. *Legs* black, with dense greenish white scaling, the tibiæ not denticulate internally in either sex.

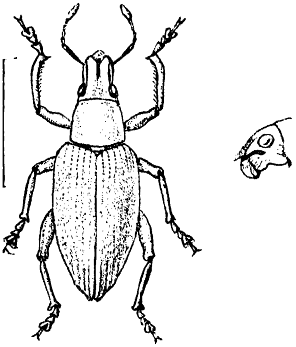

Fig. 23.—*Tanymecus chloroleucus*, Wied.

Anal segment of ♀ with a short basal longitudinal bare line on each side, the apex strongly compressed into a sharp point.

Length, ♂ 14–15, ♀ 11½–15 mm.; breadth, ♂ 5¾–6, ♀ 4¾–6¼ mm.

BENGAL: Chapra (*Mackenzie*); Purneah (*C. Paiva*—Ind. Mus.); Pusa, Bihar, on *Sesamum indicum* (Pusa Coll.). BURMA.

Type in the Copenhagen University Museum.

33. **Tanymecus sciurus**, *Oliv.* (fig. 24, *v*).

Curculio sciurus, Olivier,* Ent. v, 83, 1807, p. 323, pl. 24, fig. 337.
Tanymecus protervus, Gyllenhal, Schönh. Gen. Curc. ii, 1834, p. 80 (n. syn.).

Colour black, with uniform grey or brownish scaling.

***Eyes* short oval, slightly prominent, the space between them as broad as the base of the rostrum. *Rostrum* much broader than**

long, with a small angular emargination at the apex and a distinct central carina; the left mandible with a curved dorsal impression. *Antennæ* with the scape not reaching the posterior margin of the

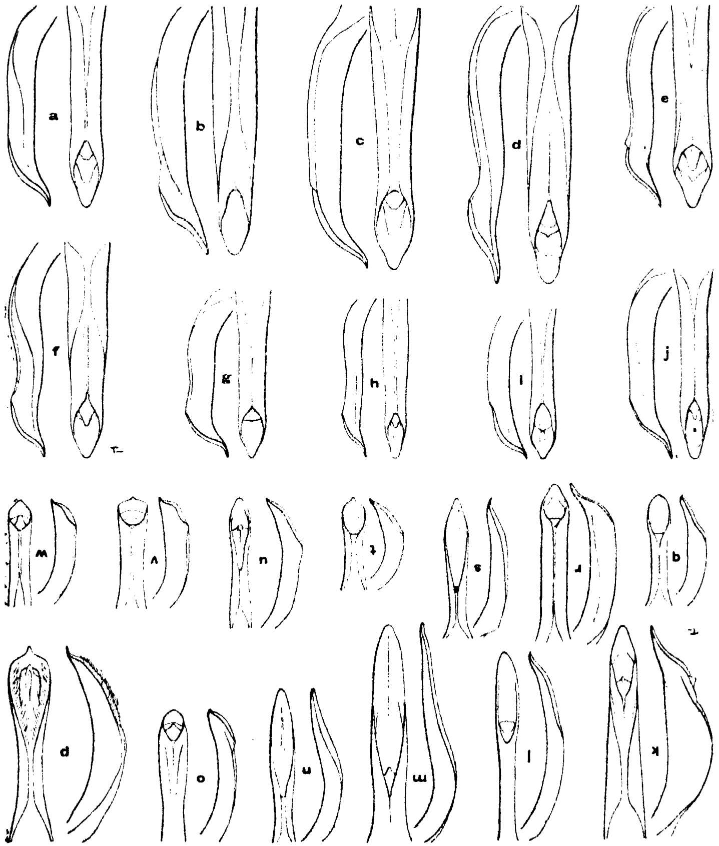

Fig. 24.—Male genitalia of Indian *Tanymecus*, all drawn to the same scale: a. *T. circumdatus*, Wied.; b. *T. hercules*, Desbr.; c. *T. chloroleucus*, Wied.; d. *T. lacordairei*, Fst.; e. *T. mixtus*, Fst.; f. *T. propinquus*, Fst.; g. *T. chevrolati*, Fhs.; h. *T, lentus*, Fst.; i. *T. feæ* var. *plumeus*, Fst.; j. *T. simplex*, Mshl.; k. *T. deceptor*, Mshl.; l. *T. princeps*, Fst.; m. *T. verlorenii*, Voll.; n. *T. chloritis*, Fst.; o. *T. pertusiventris*, Fst.; p. *T. marginalis*, Gyl.; q. *T. indicus*, Fst.; r. *T. piger*, Mshl.; s. *T. iracundus*, Fst.; t. *T. hispidus*, Mshl.; u. *T. versicolor*, Mshl.; v. *T. sciurus*, Oliv.; w. *T. cephalotes*, Fst.

eye, the funicle with joint 2 much longer than 1. *Prothorax* as long as broad or a little broader than long, subcylindrical, the sides very slightly rounded, broadest rather before the middle the apex and base of equal width, finely coriaceous and with a low narrow central carina. *Elytra* elongate, acuminate behind, the shoulders rather narrow, the apices sharply mucronate, finely punctato-striate, the striæ a little deeper at the apex, stria 9 not impressed, the posterior callus absent; the scaling not dense enough to hide the sheen of the elytra, the setæ very short

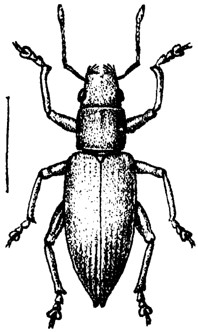

Fig. 25.—*Tanymecus sciurus*, Oliv.

and depressed. *Legs* red-brown, with thin grey scaling, the front tibiæ denticulate internally in both sexes, the hind pair in the ♂ only.

Length, 7¼–10 mm.; breadth, 2½–4 mm.

BENGAL: Chota Nagpur (*Cardon*); on sugar-cane, Pusa (*Lefroy*); Chapra (*Mackenzie*—Pusa Coll.). CENTRAL PROVINCES: Patna (Pusa Coll.).

Type ♂ in the Paris Museum; type of *T. protervus* in the Stockholm Museum.

34. Tanymecus cephalotes, *Fst.* (fig. 24, *w*).

Asemus cephalotes, Faust, Deut. Ent. Zeit. 1897, p. 351.

Colour black with brownish grey-scaling, which is uniformly dense beneath but thinner on the alternate intervals of the elytra, causing an appearance of light and dark stripes; the prothorax with a lateral darker subdenuded stripe.

Eyes narrowly elongate and only slightly prominent. *Rostrum* very short, broader than long, shallowly emarginate at apex and with a fine central carina; mandibles not projecting. *Antennæ* with the scape not reaching the posterior margin of the eye, the funicle with joint 2 much longer than 1. *Prothorax* as long as broad, cylindrical, scarcely narrower at apex than at base, closely aciculate and without any trace of a central carina. *Elytra* narrow and elongate, their sides almost parallel to beyond middle, distinctly punctato-striate, the inner striæ rather deeper at apex, stria 9 not impressed, the posterior callus obsolete; the setæ dense, very short and depressed. *Legs* piceous brown, with rather thin scaling, the tibiæ of the ♂ finely denticulate internally.

Anal segment of ♀ with the two basal lines, and rounded at the apex.

Length, 8–8½ mm.; breadth, 2⅞–3 mm.

Burma: Tharrawaddy (*G. Q. Corbett*).

Types ♂ ♀ in the Dresden Museum.

35. **Tanymecus chevrolati**, *Fhs.* (fig. 24, *g*).

Tanymecus chevrolati, Fåhræus, Schönh. Gen. Curc. vi, pt. 1, 1840, p. 242.

Colour uniform pale non-metallic green or greenish grey, the prothorax with a narrow denuded central line and a small bare spot on each side of it; the upper surface with short suberect white pubescence.

Eyes moderately prominent and broadly ovate. *Rostrum* with a small triangular incision at apex and with a distinct central carina, the mandibles large and prominent, without any dorsal transverse impression. *Antennæ* with the scape reaching only the middle of the eye, joint 2 of the funicle much longer than 1. *Prothorax* as long as broad, subcylindrical, but a little narrower at the apex, the basal margin slightly bisinuate, not punctate, but finely aciculate, with an abbreviated central carina and a bare spot on each side smooth and shiny. *Elytra* very narrow, equally acuminate and with a short apical mucro in both sexes, with fine punctate striæ, 1–3 being a little deeper at apex, 9 with a shallow subbasal impression, the pre-apical callus almost obsolete; the scaling very dense. *Legs* ferruginous brown, with dense green scaling, the front tibiæ denticulate internally in the ♂ only.

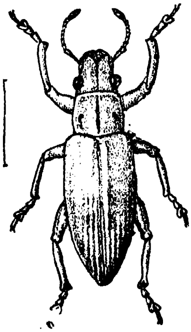

Fig. 26.—*Tanymecus chevrolati*, Fhs.

Anal segment of ♀ with the two basal lines, a large shallow median impression and the apex narrowly rounded.

Length, 7½–9½ mm.; breadth, 2½–3 mm.

Bengal: Pusa (*H. M. Lefroy*). Assam: Sylhet.

Type ♀ in the Stockholm Museum.

36. **Tanymecus burmanus**, sp. nov.

Very similar in general aspect to *T. chevrolati*, Fhs. (with which it was confused by Faust), but differing from it in the following particulars:—the scape is longer and when at rest reaches the posterior margin of the eye; the prothorax entirely lacks the central carina and the bare discal spot; the elytra are more divergent at the apex; the ♂ organ is more robust and the lateral outline of its dorsal carina forms a continuous curve, and is not deeply sinuate as in *T. chevrolati*.

Length, 8½–9½ mm.; breadth, 2¾–3¼ mm.

BURMA: Bhamo (*Fea*); Paungde, Tharrawaddy (type) and Prome (*G. Q. Corbett*).

Type ♂ in the British Museum.

37. **Tanymecus andrewesi**, *Fst.*

Asemus andrewesi, Faust,* Deut. Ent. Zeit. 1897, p. 350.

Colour shiny black, with either golden brown setæ and thin brown scaling above and dark grey scaling beneath, or with pale golden setæ and sparse green scaling above and dense green scaling on the sides and underparts.

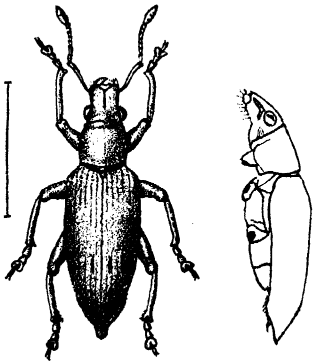

Fig. 27.—*Tanymecus andrewesi*, Fst., ♀.

Eyes prominent, broadly oval. *Rostrum* very shallowly emarginate at apex and with a fine central carina; mandibles not very prominent, the left one with an indistinct curved impression. *Antennæ* with the scape slightly exceeding the eye, the funicle with joint 2 longer than 1. *Prothorax* longer than broad, subcylindrical, narrowed and with a transverse impression at apex, with fine close and scarcely confluent punctation and with no trace of a central carina. *Elytra* acuminate behind, more sharply so in the ♂, the apices jointly mucronate, the mucro being a little longer in the ♀, with fine punctate striæ, which are rather deeper at the apex, and with a faint callus at the apex of intervals 4 and 5; the ♀ only has the margin of the elytra lobate and fringed with long hairs close to the apex. *Legs* dark ferruginous, with thin grey or greenish scaling, the posterior tibiæ of the ♂ with a few small tubercles internally.

Anal segment of ♂ with a shallow rounded apical impression, that of ♀ with two basal carinæ and the apex compressed into a point; the third ventral segment of the ♀ is deeply impressed transversely and is withdrawn beneath the apex of the second.

Length, ♂ 13–13½, ♀ 14½ mm.; breadth, ♂ 4½–5, ♀ 5¼ mm.

BURMA: Paungde (*G. Q. Corbett*—type); Pegu (*T. B. Fletcher*—Pusa Coll.). BOMBAY (*Baden*). MADRAS: Ouchterlony Valley, 3500 ft., Nilgiri Hills (*H. L. Andrewes*).

Type ♀ in the Dresden Museum.

38. **Tanymecus pertusiventris**, *Fst.* (fig. 24, *o*).

Asemus pertusiventris, Faust,* Ann. Mus. Civ. Genova, xxxiv, 1894, p. 181 (1895).

Colour piceous, with uniform brownish-grey scaling above, the underparts paler and with denser scaling.

Eyes rather prominent, broad oval. *Rostrum* shallowly emarginate at the apex and with a fine central carina; the mandibles not prominent. *Antennæ* with the scape reaching the posterior margin of the eye, the two basal joints of the funicle equal. *Prothorax* slightly longer than broad, almost cylindrical, a little narrower at the apex, where there is a shallow transverse dorsal impression, with close confluent punctation and sometimes with a faint trace of a central carina. *Elytra* strongly acuminate behind and with a sharp apical mucro in both sexes, with shallow distinctly punctate striæ, which are scarcely deeper at the apex, stria 9 with a deep fovea towards the base, intervals 4–6 with a slight callus at the apex; scaling thin, so that the sheen of the elytra can be seen through it, the setæ very short and depressed. *Legs* piceous, with fairly dense pale scaling, the hind tibiæ denticulate in the ♂ only.

Anal segment of ♀ with the usual two basal lines and compressed into a point at the apex; the third ventral segment is also transversely impressed in this sex and has a large and very deep fovea on each side; further, the margin of the elytra is slightly dilated near apex.

Length, 8½–11 mm.; breadth, 3¼–4 mm.

BENGAL: Pusa (*Lefroy*). ASSAM: Brahmaputra R. (*Doherty*); Lushai Hills; Sylhet. BURMA: Promé (*Corbett*, *Fea*—type); Tharrawaddy (*G. Q. Corbett*). SIAM. CAMBODIA (*Mouhot*).

Type ♀ in the Genoa Museum.

39. **Tanymecus hercules**, *Desbr.* (fig. 24, *b*).

Tanymecus hercules, Desbrochers des Loges,* C. R. Soc. Ent. Belg. 1891, p. ccclv.
Asemus hercules, Faust, Ann. Mus. Civ. Genova, xxxiv, 1894, p. 182 (1895).

Colour bright metallic green, the sides of the prothorax and elytra often with a more or less dense orange-yellow powdering.

Eyes fairly prominent, broadly ovate. *Rostrum* with a small triangular emargination at the apex, and a fine central carina; mandibles slightly prominent, the left one sometimes with a curved impressed line. *Antennæ* with the scape exceeding the posterior margin of the eye, the two basal joints of the funicle equal. *Prothorax* about as long as broad, the sides almost parallel from the base to beyond the middle, then narrowed to the apex, the punctation fine and close but not confluent, with no trace of a central carina. *Elytra* robust, sharply acuminate behind in the ♂, much less so in the ♀, the apices in the ♂ jointly produced into a long process bearing a tuft of orange hairs, ♀ with only a short mucro and without orange hairs, with shallow punctate striæ, which are scarcely deeper at the apex, stria 9 with a variable impression towards the base; scaling not sufficiently dense to conceal the shining integument of the elytra, the scales elongate and small, the setæ very short and depressed. *Legs* black, with dense green scaling, the tibiæ not denticulate in either sex.

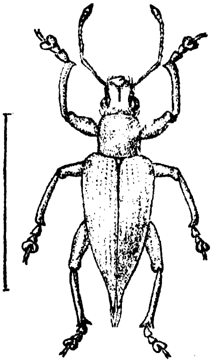

Fig. 28.—*Tanymecus hercules*, Desbr., ♂.

Anal segment of ♀ with two basal striæ, the apex sharply compressed into a short prominent carina.

Length, ♂ 17½–19½, ♀ 13–14 mm.; breadth, ♂ 6¾–8, ♀ 6–7 mm.

BURMA: Taung-ngu (*G. Q. Corbett*); Bhamo (*L. Fea*). ASSAM: Sibsagar; Sylhet, Cachar; Deju and Silonibari, N. Lakhimpur (*H. Stevens*); Imphal, Manipur (*Col. Shakespear*).

Type in the collection of the late M. Desbrochers des Loges.

This large and handsome species is said to damage young tea-shoots in Cachar.

40. **Tanymecus obscurus**, sp. nov.

Colour black, with dense uniform grey scaling, the underparts rather paler.

Eyes moderately prominent and short oval. *Rostrum* with a small apical emargination, impressed in the middle and with a short central carina; the mandibles not prominent, the left one without a transverse impression. *Antennæ* with the scape slightly exceeding the posterior margin of the eye, the two basal joints of the funicle equal. *Prothorax* as long as broad, its sides almost parallel from the base to beyond the middle, then rapidly narrowing to the apex, the upper surface with fine confluent punctation and a faint central carina in the apical half. *Elytra* broadest at the shoulders, which are very sloping, strongly acuminate behind, the apices mucronate and with a tuft of short hairs; with shallow but distinctly punctured striæ, stria 9 not impressed, 1–3 slightly deeper at the apex, the posterior callus absent; scaling dense, the setæ very short and depressed. *Legs* black, with dense scaling, the tibiæ not denticulate internally in the ♂.

♀ unknown.

Length, 15 mm.; breadth, 5½ mm.

BENGAL.

Type ♂ in the Oxford Museum.

There is in the Indian Museum a small male from Kulu, Punjab, which is apparently referable to this species, but it is in too poor condition to be identified with certainty.

41. **Tanymecus simplex**, sp. nov. (fig. 24, *j*).

Colour black, with sparse grey scaling, which sometimes forms a narrow denser stripe at the sides of the prothorax; the scutellum paler than the elytra.

Eyes rather prominent and almost circular. *Rostrum* shallowly emarginate at the apex and with a fine central carina; the mandibles rather prominent, the left one with a transverse dorsal impression. *Antennæ* with the scape reaching the posterior margin of the eye, the two basal joints of the funicle subequal, or with 1 slightly longer than 2. *Prothorax* as long as or slightly longer than broad, its sides rounded, broadest before the middle, the apex narrower than the base; the upper surface with comparatively coarse confluent punctation and with a very short, smooth central line. *Elytra* roundly narrowed behind and scarcely mucronate at the apex, finely punctato-striate, the striæ not deeper at the apex, stria 9 with a deep longitudinal impression towards the base in the ♀, not impressed in the ♂, the posterior callus faint; the scaling not dense enough to hide the gloss of the elytra, the setæ short, dense and depressed. *Legs* piceous, with thin pale scaling, the tibiæ very slightly denticulate internally in both sexes.

Anal segment of ♀ with the two raised basal lines, and compressed at the apex into a sharp prominent point.

Length, ♂ 8¾–10½, ♀ 9½–11½ mm.; breadth, ♂ 3½–4, ♀ 3¾–5 mm.

PUNJAB: Lahore (*Lefroy*). BENGAL: Pusa, on rice and on *Calotropis*; Buxa Duars (Pusa Coll.); Sahibganj. DECCAN.

Types ♂ ♀ in the British Museum.

42. **Tanymecus xanthurus**, *Chev.*

Cercophorus xanthurus, Chevrolat,* Ann. Soc. Ent. France, 1880, p. 260.

Colour black, with dense pale brown setæ and mottled with small patches of white scales; prothorax with only setæ on the disk and a lateral stripe of dull orange scales.

Eyes broadly oval and moderately prominent. *Rostrum* with a small angular emargination at the apex and with a short inconspicuous central carina (probably hidden normally beneath the scaling); the left mandible with a curved dorsal impression. *Antennæ* with the scape reaching the posterior margin of the eye, the funicle with joint 1 longer than 2. *Prothorax* as long as broad, its sides parallel from the base to beyond the middle, then rather strongly narrowed to the apex, with close confluent punctation and a very short narrow smooth central line. *Elytra* (♂) acuminate behind, the apices with a short mucro bearing a tuft of long pale orange hairs, the striæ not deeper behind, the punctures large and deep, stria 9 not impressed, the posterior callus absent; the setæ not very short, but recumbent. *Legs* black, with sparse scaling, the tibiæ not denticulate.

Length, 13½ mm.; breadth, 5 mm.

"India Orientalis" (*teste* Chevrolat).

Type ♂ in the Stockholm Museum.

43. **Tanymecus mixtus**, *Fst.* (fig. 24, *e*).

Asemus mixtus, Faust,* Ann. Mus. Civ. Genova, xxxiv, 1894, p. 180 (1895).

Colour black, with pale brownish setæ and sparse grey scales, having often a slight metallic reflexion; the scales sometimes form a more or less distinct lateral stripe on the elytra.

Eyes, *rostrum* and *antennæ* as in *T. xanthurus*, Chev. The other characters also agreeing with that species, except in the following particulars. *Prothorax* a little longer than broad and less strongly narrowed at the apex. *Elytra* with shorter setæ and with the striæ much less coarsely punctate. *Legs* with all the tibiæ finely denticulate internally.

Anal segment of ♀ carinately compressed at the apex, and with the usual basal striæ.

Length, ♂, 9¾–14, ♀ 13–15½ mm.; breadth, ♂ 3½–4½, ♀ 4½–5½ mm.

BURMA: Bhamo (*Fea*—type). BENGAL: Pusa (*C. W. Mason*); Laksham, Tipperah (Pusa Coll.); Daltonganj (Pusa Coll.); Purneah (*C. Paiva*—Ind. Mus.); Sarda (*F. W. Champion*).

Types ♂ ♀ in the Dresden Museum.

At the time when I examined the type of *T. xanthurus* the Bengal specimens here referred to *T. mixtus* were not available. There now seems some doubt whether the separation of these two species will really hold good.

44. **Tanymecus marginalis**, *Gyl.* (fig 24, *p*).

Tanymecus marginalis, Gyllenhal,* Schönh. Gen. Curc. ii, 1834, p. 87.

Tanymecus lateralis, Fåhræus,* op. cit. vi, pt. 1, 1840, p. 221.

Esamus viridiventris, Chevrolat,* Ann. Soc. Ent. France, 1880, p. 259.

Asemus lateralis, Faust, Ann. Mus. Civ. Genova, xxxiv, 1894, p. 179 (1895).

Colour black, with thin yellowish-grey scaling dorsally, the prothorax and elytra with a denser lateral yellow stripe, on the elytra this stripe does not reach the margin and is usually dusted externally with pale bluish-green scales, being occasionally very indistinct; the underparts grey, but often with a distinct greenish tinge.

Eyes short oval, moderately prominent. *Rostrum* slightly sinuate at the apex, with a shallow dorsal impression and sometimes with a faint carina. *Antennæ* with the scape reaching, or slightly exceeding, the posterior margin of the eye, the two basal joints of the funicle equal. *Prothorax* as long as broad, its sides subparallel from the base to beyond the middle, then gradually narrowed to the apex, closely and shallowly punctate, without any trace of a central carina. *Elytra* acuminate behind, slightly shorter and broader in the ♀, apices with a short sharp mucro; punctato-striate, the juxta-sutural striæ slightly deeper and almost impunctate towards the apex, stria 9 shallowly impressed before the middle, the posterior callus absent; the setæ short and depressed. *Legs* ferruginous, with thin scaling, the tibiæ not, or only obsoletely, denticulate.

Anal segment of ♀ rounded at the apex, with a shallow apical impression and two basal striæ; the third ventral segment with a shallow lateral impression on each side and slightly retracted under the second.

Length, ♂ 9–10, ♀ 7–9 mm.; breadth, ♂ 3¼–3¾, ♀ 2¾–3¼ mm.

NEPAL (*teste* Faust). BENGAL: Barisal (*H. M. Lefroy*—Pusa Coll.); Port Canning and Matla, Sundarbans (*J. T. Jenkins*—Ind. Mus.); Khargpur (*R. Hodgart*—Ind. Mus.); Salt Lakes, nr. Durgapur, Calcutta (*F. H. Gravely*—Ind. Mus.). BURMA: Rangoon (*H. L. Andrewes*); Palon (*L. Fea*); Prome (*G. Q. Corbett*). SIAM. JAVA (*teste* Faust).

Type ♀ in the Stockholm Museum; also the types of *T. lateralis* and *T. vividiventris.*

45. **Tanymecus arenaceus**, sp. nov.

Colour black, with uniform dense pale fawn scaling, the scales often having a slight metallic reflexion and being paler at the sides of the elytra; the prothorax with a well-defined narrow dark central stripe, and a faint darker stripe on each side; underparts whitish.

Eyes oval and very prominent. *Rostrum* evidently broader than long, with a fine central carina, the apex with a shallow incision; mandibles not prominent, the left one truncate internally and with no dorsal impressed line. *Antennæ* with the scape reaching the posterior margin of the eye, the two basal joints of the funicle equal. *Prothorax* as long as broad, its sides parallel from the apex to the middle and then gradually narrowed to the base, the upper surface smooth, with the sculpturing completely hidden beneath the scaling. *Elytra* oblong-ovate, rather broadly rounded behind, the apices dehiscent but not mucronate, the shoulders prominent and forming an obtuse angle; when the scaling is intact the striæ appear very fine and the shallow punctation is not perceptible, the intervals much broader than the striæ, plane and with very short depressed setæ, stria 9 not impressed, the posterior callus faint. *Legs* piceous, with rather thin pale scaling and setæ, the tibiæ not denticulate internally in the ♀.

Anal segment of ♀ without the basal lines, not compressed but rounded at the apex.

Length, 5½ mm.; breadth, 2⅜ mm.

BENGAL: Pusa (*H. M. Lefroy*).

Type ♀ in the British Museum.

46. **Tanymecus lentus**, *Fst.* (fig. 24, *h*).

Asemus lentus, Faust,* Ann. Mus. Civ. Genova, xxxiv, 1894, p. 179 (1895).

Colour black, with rather thin scaling (denser laterally) which is variable in colour, being usually grey with a greenish or coppery reflexion, but sometimes brownish, especially on the sides of the thorax.

Eyes moderately prominent, broadly ovate. *Rostrum* with a rather deep angular emargination at the apex and with a low central carina, which is usually divided longitudinally by a fine stria; mandibles rather prominent and rounded, without any transverse impression. *Antennæ* with the scape reaching the posterior margin of the eye, the funicle with joint 2 longer than 1 in the ♀, but only slightly so in the ♂. *Prothorax* about as long as broad, its sides slightly rounded, evidently narrower at the apex than at the base, with shallow confluent punctation and a smooth central line. *Elytra* gradually acuminate from the shoulders in the ♂, more rounded in the ♀, with the shoulders more sloping than usual, the apex with a short mucro; punctato-striate, the punctation much fainter towards the apex, stria 9 not impressed, the posterior callus scarcely noticeable; the scaling not sufficiently dense dorsally to hide the sheen of the elytra, the setæ very short and depressed. *Legs* black, with fairly dense scaling, all the tibiæ slightly denticulate in both sexes.

Anal segment of ♀ with the two basal striæ, and strongly compressed into a short carina at the apex.

Length, ♂ 8½–11¾, ♀ 10½–12¾ mm.; breadth, ♂ 3¼–4½, ♀ 4–5¼ mm.

Burma: Bhamo, Teinzo and Shwegu (*L. Fea*—types). Assam: Dilkusha (*Inglis*); Silonibari, N. Lakhimpur (*H. Stevens*). Bengal: Purneah (*C. Paiva*—Ind. Mus.); Sara Ghat (*E. Brunetti*—Ind. Mus.). Central Provinces: Nagpur (*H. M. Lefroy*—Pusa Coll).

Types ♂ ♀ in the Genoa Museum.

47. **Tanymecus piger**, sp. nov. (fig. 24, *r*).

Colour black, with sparse grey scaling having a slight coppery reflexion, the prothorax with three darker denuded stripes, the elytra with the scaling denser laterally.

Eyes prominent and nearly circular. *Rostrum* angularly excised at the apex and with a sharp central carina; the mandibles prominent, the left one rounded and without any dorsal impression. *Antennæ* with the scape slightly exceeding the posterior margin of the eye, the funicle with joint 2 scarcely longer than 1. *Prothorax* as long as broad, its sides slightly rounded, scarcely broader at the middle than at the base, the apex much narrower, with close confluent punctation and a very short smooth central line. *Elytra* broad, acuminate behind, the shoulders very sloping, the apices divergent, each with a blunt mucro covered with short setæ, finely punctato-striate, the juxta-sutural striæ much broader and deeper at the apex, stria 9 not impressed; the setæ very short and depressed. *Legs* black, with sparse grey scaling, all the tibiæ denticulate internally.

♀ unknown.

Length, 13½ mm.; breadth, 5¾ mm.

Bengal: Chapra (*Mackenzie*—type); Pusa.

Type ♂ in the British Museum.

48. **Tanymecus deceptor**, sp. nov. (fig. 24, *k*).

Colour black, with rather thin uniform grey scaling.

Eyes not very prominent, broadly oval. *Rostrum* with a small emargination at apex, with a dorsal medial impression and a faint central carina; mandibles rather prominent, the left one with a deep longitudinal impression. *Antennæ* with the scape exceeding the posterior margin of the eye, the two basal joints of the funicle equal. *Prothorax* as long as broad, its sides rounded, broadest before middle, the apex scarcely narrower than the base; the upper surface rather coarsely and confluently punctate and without any central carina. *Elytra* roundly narrowed behind, with a short apical mucro bearing a small tuft of pale hairs, very shallowly punctato-striate, so that the punctures are imperceptible through the scaling and the striæ are only faintly visible, stria 9 with a very shallow impression towards the base, the posterior callus absent; scaling nearly thick enough to conceal the gloss of the elytra, the setæ short and depressed. *Legs* black, with thin pale scaling, all the tibiæ finely denticulate internally in the ♂.

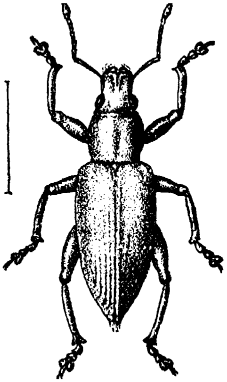

Fig. 29.—*Tanymecus deceptor*, Mshl.

♀ unknown.

Length, 12½ mm.; breadth, 5 mm.

Assam: Deju, N. Lakhimpur (*H. Stevens*); Dibrugarh, Lakhimpur (*Mrs. Evans*—type).

Type ♂ in the British Museum.

49. **Tanymecus lefroyi**, sp. nov.

Colour black, with fairly dense uniform dark brown scaling, the elytra with a well defined lateral white stripe which does not reach the margin; underparts with brownish-grey scaling.

Eyes prominent, nearly circular. *Rostrum* shallowly emarginate at the apex and with a short central carina; mandibles prominent, the left one with a curved dorsal impression. *Antennæ* with the scape exceeding the posterior margin of the eye, the two basal joints of the funicle equal. *Prothorax* as broad as long, its sides regularly rounded, broadest at the middle, the apex scarcely narrower than the base, the upper surface finely scrobiculate and without any trace of a central carina. *Elytra* gradually acuminate behind, the apices each with a short divergent mucro; finely punctato-striate, the striæ scarcely deeper at the apex, stria 9 hardly impressed, the posterior callus absent. *Legs* black, with thin brownish grey scaling, all the tibiæ more or less denticulate internally in the ♀.

Anal segment of ♀ with a short basal stria on each side, the apex compressed into a point and with an elongate central fovea.

♂ unknown.

Length, 15 mm.; breadth, 5¾ mm.

ASSAM (*Lefroy*).

Type ♀ in the British Museum.

50. **Tanymecus lacordairei**, *Fst.* (fig. 24, *d*).

Asemus lacordairei, Faust,* Ann. Mus. Civ. Genova, xxxiv, 1894, p. 180, note (1895).

Colour black, with rather thin uniform greenish scaling, the elytra with a very sharply defined white lateral stripe between striæ 7 and 9 near the base, and between 6 and 8 near the apex; the prothorax with a narrow lateral stripe of denser greyish scaling.

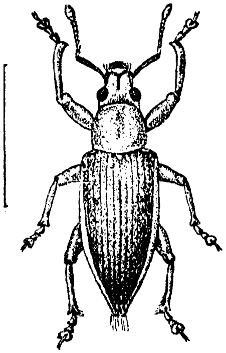

Fig. 30.—*Tanymecus lacordairei*, Fst.

Eyes very prominent, almost circular. *Rostrum* shallowly emarginate at the apex, with a faint central carina, which is often divided by a fine stria; mandibles prominent, shiny and without any transverse dorsal impression. *Antennæ* with the scape attaining the posterior margin of the eye, the two basal joints of the funicle subequal. *Prothorax* a trifle broader than long, broadest at the base, much narrower at the apex, the sides gently rounded, with close confluent punctation and a faint trace of a central carina. *Elytra* strongly acuminate behind in ♂, more gradually in ♀, jointly mucronate at the apex, the mucro longer and with a short tuft of pale hairs in the ♂, with narrow finely punctate striæ, 1–3 much broader and deeper at the apex, 9 scarcely impressed; scaling narrow, thinly distributed (dense in 1 specimen out of 20); setæ dense, short and depressed. *Legs* black, with rather sparse pale scaling, the front tibiæ finely denticulate in the ♂ only.

Anal segment of ♀ with the two basal striæ, and strongly compressed at the apex into a prominent short carina.

Length, ♂ 12½–17, ♀ 11–17 mm.; breadth, ♂ 4½–6¾, ♀ 4½–7½ mm.

BENGAL: Pusa (*Lefroy*); Chapra (*Mackenzie*—Pusa Coll.).

Types ♂ ♀ in the Dresden Museum.

51. **Tanymecus circumdatus**, *Wied.* (fig 24, *a*).

Curculio circumdatus, Wiedemann,* Germ. Mag. iv, 1821, p. 156.
Tanymecus circumdatus, Mäklin, Act. Soc. Fenn. vii, 1863, p. 129; Faust, Ann. Mus. Civ. Genova, xxxiv, 1894, p. 180 (1895).
Tanymecus rusticus, Gyllenhal,* Schh. Gen. Curc. ii, 1834, p. 83; Fåhræus, op. cit. vi, pt. 1, 1840, p. 235 (n. syn.).
Esamus falsus, Chevrolat,* Ann. Soc. Ent. France, 1880, p. 257 (n. syn.).
Esamus leucocephalus, Chevrolat,* l. c. (n. syn.).
Esamus albicinctus, Chevrolat,* op. cit. p. 258 (n. syn.)
Esamus polygrammus, Chevrolat,* l. c. (n. syn.).
Tanymecus subaureus, Desbrochers des Loges, C. R. Soc. Ent. Belg. xxxv, 1891, p. ccclv.

Colour greyish or pinkish fawn, usually with a metallic coppery reflexion, prothorax with three dark subdenuded stripes, the central one narrower; elytra with the suture and alternate intervals with thinner scaling, thus giving an appearance of light and dark stripes, and with a broad white lateral stripe, the extreme margin usually darker.

Eyes moderately prominent, oval. *Rostrum* shallowly emarginate at apex and with a distinct central carina; left mandible moderately prominent and with a transverse dorsal impression. *Antennæ* with the scape reaching or slightly exceeding the posterior margin of the eye, the two basal joints of the funicle subequal. *Prothorax* as long as broad or slightly longer than broad, broadest at the base, much narrower at the apex, the sides gently rounded, the punctation fine, shallow and close. *Elytra* strongly acuminate behind, more especially in the ♂, the apices shortly mucronate in both sexes, with fine distinctly punctate striæ, the juxtasutural ones not deeper at the apex, the ninth stria with two shallow impressions not far from the base; scaling of varying density; the setæ very short, dense and depressed. *Legs* black, with dense pale scaling, the tibiæ not denticulate internally in either sex.

Anal segment of ♀ with two basal striæ, and compressed into a point at the apex.

Length, ♂ 11–16½, ♀ 11–15 mm.; breadth, ♂ 4½–6½, ♀ 4½–5¾ mm.

BURMA: Pegu Yomas, Thayetmyo dist. (*C. J. Rogers*—Ind. Mus.). ASSAM: Dilkusha (*Inglis*); Tezpur (*Desenne*—Pusa Coll.); Gauhati (*S. W. Kemp*—Ind. Mus.); Seajuli and Silonibari, N. Lakhimpur (*H. Stevens*); Khasi Hills. BENGAL: Purneah (*C. Paiva*—Ind. Mus.); Dacca and Maldah (Ind. Mus.); Murshidabad (*E. T. Atkinson*); Sahibganj (*Atkinson, J. Wood-Mason*). NEPAL. PUNJAB: Lahore (*H. M. Lefroy*—Pusa Coll.).

Type in the Copenhagen University Museum; Gyllenhal's and Chevrolat's types in the Stockholm Museum.

Owing apparently to a mistake on the part of Westermann, Schönherr concluded that his *T. albomarginatus* was identical with *T. circumdatus*, Wied., and this has been followed by subsequent authors. An examination of Wiedemann's type, which agrees well with his description, shows this to be an error. The species is variable both in size and colour, but the following variety alone seems to be worthy of recognition.

T. circumdatus var. rusticus, *Gyl.*

This form is on the average a good deal smaller and the elytra lack the alternate darker and paler stripes, the scaling being denser on the intervals 1–3 and thinner on 4–6.

UNITED PROVINCES: Dehra Dun (*G. Rogers*). BENGAL: Chota Nagpur (*Cardon*).

Type in the Stockholm Museum.

T. leucocephalus, Chev., and *T. subaureus*, Desb., are both synonyms of this variation.

The name *T. falsus* was given by Chevrolat to this species because he thought that *T. rusticus*, Gyl., was the same as *Hypomeces rusticus*, F. His typical specimen has more or less green scaling on the upper surface, and this form appears to be prevalent in the Punjab.

52. Tanymecus albomarginatus, *Gyl.*

Tanymecus albomarginatus, Gyllenhal,* Schönh. Gen. Curc. ii, 1834, p. 81; Mäklin, Act. Soc. Fenn. vii, 1863, p. 131.
Tanymecus confinis, Gyllenhal,* op. cit. p. 83 (n. syn.).
Tanymecus circumdatus, Schönherr (*nec* Wied.), Gen. Curc. vi, pt. 1, 1840, p. 234; Labram & Imhoff, Gen. Curc. Icon. ii, 1845, no. 45.

Colour grey or fawn, elytra with a broad whitish lateral stripe which does not reach the extreme margin, prothorax with a broad denuded lateral stripe.

Eyes oval, convex, but much less prominent than usual. *Rostrum* very shallowly emarginate at apex, the central carina much reduced; mandibles moderately prominent, the left one with a curved dorsal impression. *Antennæ* with the scape reaching or exceeding the posterior margin of the eye, the two basal joints of the funicle subequal. *Prothorax* as in *T. circumdatus*, but with fine confluent punctation and with a more or less distinct abbreviated central carina. *Elytra* gradually acuminate behind, similar in the two sexes, agreeing in other respects with those of *T. circumdatus*, except that there is only one very faint impression in the basal half of the ninth stria; scaling moderately dense, but often thinner close to the lateral white stripe, the setæ short and depressed. *Legs* black, with dense pale scaling, the tibiæ finely denticulate internally in the ♂ only.

Anal segment of ♀ as in *T. circumdatus*.

Length, 12–15½ mm.; breadth, 4½–6½ mm.

CAMBODIA. BURMA. BENGAL. PUNJAB: Garshanker. BOMBAY: Polybetta (Pusa Coll.). ARABIA. EGYPT. ABYSSINIA. SENEGAL.

Type in the Stockholm Museum; also that of *T. confinis*.

53. **Tanymecus propinquus**, *Fst.* (fig. 24, *f*).

Asemus propinquus, Faust, Deut. Ent. Zeit. 1897, p. 350.

Colour piceous, with thin greyish or sandy scaling above, the prothorax and elytra with a lateral stripe of dense pinkish or grey scaling, the underparts rather paler and densely squamose.

Eyes moderately prominent, broadly ovate. *Rostrum* with a small triangular emargination at the apex and with a distinct central carina; mandibles not very prominent, the left one with a transverse dorsal impression. *Antennæ* with the scape reaching the posterior margin of the eye; the two basal joints of the funicle equal. *Prothorax* about as long as broad, its sides subparallel from the base to beyond the middle, then distinctly narrowed to the apex, with very shallow confluent punctation and no central carina. *Elytra* acuminate behind and with a short apical mucro in both sexes, with shallow distinctly punctate striæ, which are not deeper at the apex, stria 9 with a faint subbasal impression, the posterior callus absent; scaling very thin dorsally, the setæ dense and depressed. *Legs* piceous, with dense sandy scaling, all the tibiæ denticulate internally in the ♂ only.

Anal segment of ♀ with two basal striæ, and slightly compressed into a blunt point at the apex.

Length, 13½–16 mm.; breadth, 5½–6 mm.

BURMA: Paungde (type) and Tharrawaddy (*G. Q. Corbett*); Rangoon; Minbu (*T. B. Fletcher*—Pusa Coll.).

Types, ♂ in the Dresden Museum, ♀ in Coll. H. E. Andrewes.

54. Tanymecus innocuus, *Fst.*

Asemus innocuus, Faust,* Deut. Ent. Zeit. 1897, p. 350.

I have seen one ♂ and two ♀ ♀ of the specimens described by Faust. Of the latter, one example (in the British Museum) appears to be quite inseparable from *T. propinquus*, Fst., while the other two specimens are only to be distinguished from it by the following characters:—(1) the prothorax is slightly longer than broad, (2) the tibiæ of the ♂ are not denticulate internally, (3) the anal segment of the ♀ has an elongate fovea at the apex, and (4) the smaller size. I have been unable to dissect out the ♂ genitalia; if they prove to be identical with those of *T. propinquus*, I should regard these insects as aberrant specimens of that species.

Length, 12–12½ mm.; breadth, 4½–4¾ mm.

BURMA: Paungde (*G. Q. Corbett*—type); Minbu (*T. Bainbrigge Fletcher*—Pusa Coll.).

Types ♂ ♀ in the Dresden Museum.

55. Tanymecus versicolor, sp. nov. (fig. 24, *u*).

Colour extremely variable; either uniform pale fawn, with or without a coppery reflexion; or pale fawn, with a broad paler lateral stripe of grey, green or paler fawn; or grey with a green lateral stripe; or uniform pale green. The type specimens are fawn with a green lateral stripe.

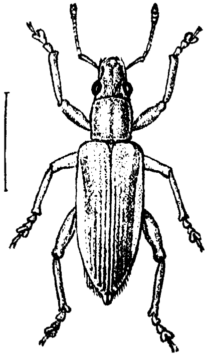

Fig. 31.—*Tanymecus versicolor*, Mshl.

Eyes almost circular, very prominent. *Rostrum* scarcely as long as broad, slightly narrowed in front, the apex very shallowly emarginate, with a central impressed line above, without any carina; the left mandible with a deep transverse impressed line and with a sharp apical tooth. *Antennæ* with the scape not reaching the posterior margin of the eye, the funicle with the two basal joints equal. *Prothorax* as long as or a little longer than broad, its sides gently rounded, broadest before the middle, the apex scarcely narrower than the base, with fine and extremely shallow punctation above, without any central carina, but with a shallow transverse impression just behind the apex. *Elytra* narrowly elongate, acuminate behind, the apices sharply mucronate in both sexes, very finely punctato-striate, the striæ rather deeper behind, stria 9 not impressed, the posterior callus slightly developed; the scaling fairly dense; the setæ not very short, subdepressed, but easily visible from the side. *Legs* long and slender, light ferruginous, with pale scaling, all the tibiæ finely denticulate in both sexes, the intermediate tibiæ of the ♀ only with a long sickle-shaped hook at the apex, the hind tarsi with joint 2 longer than 3.

Anal segment of ♀ obtusely pointed and with a shallow impression just before the apex.

Length, 7¼–9½ mm.; breadth, 2¼–3 mm.

Types ♂ ♀ in the British Museum.

The long apical spur on the intermediate tibiæ of the ♀ is, so far as I am aware, a unique character in the genus.

Assam: Jorhat (Pusa Coll.); Gauhati (Pusa Coll.); Nongpoh, Khasi Hills (*D. Nowroji*—Pusa Coll.). Bengal: Pusa (*H. M. Lefroy*); Mokamah Ghat; Sara Ghat (*R. Hodgart*—Ind. Mus.); Dacca (type). Sikkim: Mungphu (*E. T. Atkinson*). United Provinces: Allahabad.

56. **Tanymecus longulus**, *Fhs.*

Tanymecus longulus, Fåhræus,* Schönh. Gen. Curc. vi, pt. 1, 1840, p. 244.

Colour black, with dense sandy grey scaling above, the underparts, as well as a broad lateral stripe on the elytra reaching the external margin, paler or sometimes with a distinct greenish tinge.

Eyes short oval, moderately prominent. *Rostrum* very shallowly sinuate at the apex and with a fine central carina; the mandibles rather prominent, the left one with a curved impressed dorsal line. *Antennæ* with the scape reaching about the middle of the eye, the two basal joints of the funicle equal. *Prothorax* as long as broad, its sides subparallel from the base to beyond the middle, then narrowed to the apex, finely coriaceous and with a faint trace of a central carina. *Elytra* narrowly elongate, acuminate behind in the ♂, more parallel-sided in the ♀, the shoulders very narrow and sloping, apices with a short sharp mucro; the striæ fine and rather deeper at the apex, the punctation not visible through the scaling; stria 9 not impressed, the posterior callus absent; scaling very dense, the setæ short and depressed. *Legs* densely squamose, all the tibiæ obscurely denticulate in both sexes, the second joint of the hind tarsi longer than the third.

Anal segment of ♀ rounded at the apex and with two basal striæ.

Length, 8¼–11 mm.; breadth, 2½–3¾ mm.

BENGAL: Pusa. ASSAM: Nongpoh, Khasi Hills (*D. Nowroji*—Pusa Coll.).

Type ♂ in the Stockholm Museum.

57. **Tanymecus feæ**, *Fst.*

Asemus feæ, Faust,* Ann. Mus. Civ. Genova, xxxiv, 1894, p. 182 (1895).
Asemus plumeus, Faust,* l. c. p. 183, note (n. syn.).
Asemus subvittatus, Faust,* Deut. Ent. Zeit. 1897, p. 352 (n. syn.).

Colour black, with uniform greenish grey scaling in the typical form; the scales very narrow and elongate, hair-like.

Eyes slightly prominent and broadly ovate. *Rostrum* with its apical margin only slightly sinuate, shallowly impressed dorsally and with a narrow bare central line; mandibles prominent, the left one with a curved carina along its dorsal margin. *Antennæ* with the scape not reaching the posterior margin of the eye, the two basal joints of the funicle equal. *Prothorax* a little longer than broad, subcylindrical, but slightly narrowed at the apex, the upper surface finely coriaceous and sometimes with a faint trace of a central carina. *Elytra* narrowly elongate and acuminate behind, subparallel from the shoulders to beyond the middle in the ♀, gradually narrowed in the ♂, sharply mucronate at the apex in both sexes, with fine punctate striæ which are not deeper at apex, stria 9 not impressed, the posterior callus absent; scaling not sufficiently dense to conceal the sheen of the elytra, the scales narrowly elongate; the setæ short, subdepressed and scarcely distinguishable from the scaling except when viewed from the side. *Legs* slender, piceous or ferruginous, with dense scaling, all the tibiæ distinctly denticulate in both sexes, the tarsi elongate, the second joint of the hind pair longer than the third.

Anal segment of ♀ with two basal striæ, the apex rounded and not compressed.

Length, 10–11½ mm.; breadth, 3½–4 mm.

BURMA: Bhamo, Teinzo and Katha (*Fea*).

Types ♂ ♀ in the Genoa Museum.

To the north this species is represented by the following local race which Faust regarded as a distinct species; but I cannot confirm the existence of the structural differences which he mentions, and moreover the ♂ genitalia of the two forms are entirely similar.

T. feæ var. plumeus, *Fst.* (fig. 24, *i*).

Colour pale grey, or pale sandy, without any greenish tinge; the scaling denser than in the typical form, so that the gloss of the elytra is not visible through it; the setæ more elevated and readily discernible when the insect is held against the light.

ASSAM: Dilkusha (*Inglis*). BENGAL: Pusa, on indigo (*Lefroy*); Rajmahal (*Annandale*—Ind. Mus.); Sara Ghat (*E. Brunetti*—Ind. Mus.); Calcutta (type). SIKKIM: Kurseong, 5000 ft. AFGHANISTAN.

Type in the Dresden Museum.

In Southern Burma the following local form occurs:—

T. feæ var. **subvittatus**, *Fst.*

Differs from the typical form only in having brownish grey scaling which is thinner on the alternate intervals of the elytra, causing an appearance of light and dark stripes.

BURMA: Tharrawaddy and Shwegyin (*G. Q. Corbett*).

Types ♂ ♀ in the Dresden Museum.

Still further south, in Tenasserim and Siam, the last-mentioned form gradually merges into another which is of a uniform dark coffee-brown colour.

58. **Tanymecus mandibularis**, sp. nov.

Colour black, with dense overlapping sandy grey or brownish scales.

Eyes short oval, slightly prominent. *Rostrum* subtruncate at the apex, with a shallow dorsal impression and a faint central carina; the mandibular scars situated on two very prominent and divergent processes. *Antennæ* with the scape exceeding the posterior margin of the eye, joint 1 of the funicle much longer than 2. *Prothorax* a trifle longer than broad, its sides slightly rounded, broadest well before middle, the apex narrower than the base, coriaceous above and without any central carina. *Elytra* fairly broad, slightly acuminate behind in the ♂, more parallel-sided in the ♀, apices scarcely mucronate, finely punctato-striate, the striæ not deeper towards apex and the punctation invisible through the scaling, stria 9 not impressed, the posterior callus absent; the scaling dense, the setæ rather longer than usual but recumbent. *Legs* rather long, densely squamose, the tibiæ not denticulate in either sex, the hind tarsi with the second joint evidently longer than the third, which is narrower than usual.

Anal segment of ♀ rounded at the apex and with two basal striæ.

Length, 10½ mm.; breadth, 4¼–4½ mm.

BALUCHISTAN (type). PERSIA: Seistan Desert (*Gen. Sir A. H. McMahon*—Ind. Mus.).

Type ♂ in the British Museum.

This species differs from all other members of the genus known to me in lacking the single long erect seta on the trochanter. In its tarsal structure it approaches *Phacephorus* owing to the narrowness of the third joint, which in the ♀ is not spongy beneath; but apart from its more convex and pointed elytra, that sex differs from the species of *Phacephorus* in the much narrower intercoxal process of the first ventral segment, the absence of the trochanter bristles, and the impressed epistome.

59. **Tanymecus princeps**, *Fst.* (fig. 24, *l*).

Esamus princeps, Faust,* Stett. Ent. Zeit. 1891, p. 263.

Colour black, with uniform bright metallic green scaling above and below.

Eyes oval, moderately prominent. *Rostrum* shallowly sinuate at the apex and without any central carina; the mandibles not very prominent. *Antennæ* with the scape slightly exceeding the posterior margin of the eye, joint 1 of the funicle longer than 2. *Prothorax* longer than broad, its sides rounded, broadest before middle, the apex scarcely narrower than the base, finely coriaceous and without any central carina. *Elytra* elongate, gradually narrowed behind from the shoulders, each with a short divergent mucro at apex, with shallow distinctly punctate striæ which are not deeper apically, stria 9 not impressed, the posterior callus present; the scaling dense, the setæ very short and depressed, hardly distinguishable. *Legs* slender, with dense green scaling, the tibiæ not denticulate in either sex, the tarsi elongate, the second joint being distinctly longer than the third.

Anal segment of ♀ rounded at the apex and without any basal impressions.

Length, 6¾–7 mm.; breadth, 2¼ mm.

Bengal: Palamow (Pusa Coll.). Central Provinces: Hoshangabad (*T. B. Fletcher*—Pusa Coll.); Nagpur, 1000 ft. (*E. A. d'Abreu, Hauser*—type). Bombay; Surat, on cotton leaves; Belgaum (*H. E. Andrewes*); Sampgaon, Belgaum (*R. P. Barrow*); N. Kanara (*T. R. D. Bell*).

Type ♂ in the Dresden Museum.

Mr. H. E. Andrewes writes that he found this insect to be fairly common round Belgaum during the rains; it was generally observed on the beans or other plants bordering the rice-fields.

60. **Tanymecus iracundus**, *Fst.* (fig. 24, *s*).

Esamus iracundus, Faust,* Stett. Ent. Zeit. 1891, p. 264

This species is extremely close to *T. princeps*, Fst., and it is doubtful whether it can be regarded as more than a slight local variation. The distinctive characters assigned to it by Faust are as follows:—"Shorter, beneath more densely and above *more sparsely* clothed with *opaque* green scales; forehead and rostrum broader, the latter very short; antennæ red-brown; prothorax half as long again as its width; elytra shorter, the punctures in the striæ equal throughout."

Besides the type I have seen only a single ♂, named by Faust himself, in the British Museum, and the structural distinctions given do not appear to be very convincing, while the punctures on the elytra are unquestionably much smaller behind. The colouring is different, being dull blue-green, the scales are smaller and more sparse, and there is a slight difference in the genitalia of the only specimen examined (fig. 24, *l*, *s*).

Length, 7¼–7¾ mm.; breadth, 2½ mm.

Burma: Tenasserim (*Nickerl*—type); Tharrawaddy (*G. Q. Corbett*).

Type ♂ in the Dresden Museum.

61. Tanymecus hispidus, sp. nov. (fig. 24, *t*).

Colour black, with uniform greyish-brown scaling and a small dark spot at the posterior callus; the upper surface set with short, stiff, erect, or suberect, setæ.

Eyes short oval, slightly prominent; the forehead very broad, its narrowest part as broad as the base of the rostrum. *Rostrum* stout, broader than long, very shallowly sinuate at the apex, without any central carina. *Antennæ* with the scape reaching the posterior margin of the eye, joint 1 of the funicle longer than 2. *Prothorax* longer than broad and with the sides slightly rounded in the ♂, as long as broad and with the sides more rounded in the ♀, broadest before the middle, the apex not narrower than the base, the apical margin more obliquely truncate laterally than usual, the upper surface finely coriaceous and without any central carina. *Elytra* parallel-sided from the shoulders to beyond the middle, separately rounded at the apex, distinctly punctato-striate, the striæ not deeper behind, the posterior callus faint; the scaling and setæ dense. *Legs* piceous, the tibiæ not denticulate internally.

Anal segment of ♀ rounded at the apex and without any basal striæ.

Length, 4¾–5¼ mm.; breadth, 1¾–2 mm.

Bengal: Pusa, on rice (*Lefroy*—type); Dholi, attacking maize (Pusa Coll.). United Provinces: Rampurchaka, Bijnor dist. (Ind. Mus.). Punjab: Jullundur (*Lefroy*).

Types ♂ ♀ in the British Museum.

62. Tanymecus hirticeps, sp. nov.

Colour black, with dense uniform metallic-green scaling.

Eyes ovate, moderately prominent; the forehead with a very fine sinuous central carina, which is continued on to the rostrum. *Rostrum* about as long as broad, the upper surface quite flat, the sculpture hidden by the scaling, except the fine central carina, the apex scarcely emarginate, though the deflexion of the scaleless epistome makes it appear as though there were a fairly deep emargination; both head and rostrum covered with fairly long, dense, obliquely raised, white setæ. *Antennæ* black, with pale greenish setæ; the scape straight, gradually widened, and reaching the hind margin of the eye; the funicle with joint 1 much longer than 2, 3 to 7 transverse, 7 being longer and broader than the others. *Prothorax* as long as broad, the sides gently rounded, broadest about the middle, the apex evidently narrower than the base, the upper surface rather rugosely punctate throughout, the subgranulate interspaces showing through the scales. *Elytra* (♀) parallel-sided from the shoulders to the middle, thence gradually acuminate, the apices divergently pointed; the striæ shallow on the disk, deeper behind, the punctures not visible through the scaling, the intervals flat, with a distinct impression behind the posterior callus, the scales oblong-ovate, the setæ short and recumbent. *Legs* with dense green scaling, the tibiæ not denticulate.

Anal segment of ♀ shorter than its basal width, with a broad shallow impression on each side, but no impressed lines, the apex broadly rounded.

Length, 7 mm.; breadth, 2½ mm.

CENTRAL PROVINCES: Hoshangabad (*E. A. D'Abreu*).

Type ♀ in the British Museum.

63. **Tanymecus indicus**, *Fst.* (fig. 24, *q*).

Tanymecus indicus, Faust,* Ann. Mus. Civ. Genova, xxxiv, 1894, p. 177, note (1895).

Colour black, with brown scaling more or less irrorated with grey, and usually with a few green scales at the apex of the rostrum.

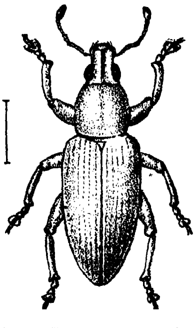

Fig. 32.—*Tanymecus indicus*, Fst.

Eyes very slightly prominent, large, oval, almost as long as the rostrum. *Rostrum* as long as broad, very shallowly sinuate at the apex, with a distinct central carina, the mandibles not prominent. *Antennæ* with the scape strongly bisinuate and scarcely reaching the posterior margin of the eye, the funicle with joint 1 evidently longer than 2. *Prothorax* a little longer than broad, its sides rounded, broadest slightly before middle, the apex only slightly narrower than the base, finely coriaceous and usually with a faint trace of a central carina in the anterior half. *Elytra* broadest at the shoulders and very gradually narrowing behind, the apices divergently pointed, punctato-striate, the striæ not much deeper towards the apex, the punctures only visible through the scaling in the basal half, stria 9 not impressed, the posterior callus present but not pronounced; scaling fairly dense, the scales narrow, the setæ very short and scarcely discernible among the scales. *Legs* black, with fairly dense scaling, the tibiæ not denticulate internally.

Anal segment of ♀ nearly twice as broad as long, with a median longitudinal impression and rounded at the apex.

Length, 4½–7½ mm.; breadth, 1¾–2¾ mm.

ASSAM: Mazbat, Mangaldai dist. (*S. W. Kemp*—Ind. Mus.). BENGAL: Calcutta (*F. H. Gravely*—Ind. Mus.); Sahibganj (*Wood-Mason*); Purneah, Asansol and Madhupur (*C. A. Paiva*—Ind. Mus.); Goalbathan (*R. Hodgart*); Dinapur, Bihar (*Caunter*); Sarda (*F. W. Champion*); Narayanganj, Dacca (Pusa Coll.); Bankipur (*T. B. Fletcher*—Pusa Coll.); Pusa, Bihar (*H. M. Lefroy*); Chapra (*Lefroy*). UNITED PROVINCES: Zamaniah, Ghazipur (*J. Cockburn*—Ind. Mus.); Allahabad (*S. W. Kemp*); Partabgarh. PUNJAB: Tahsil Chikwal, Jhilam dist.

Types ♂ ♀ in the Dresden Museum.

This insect has proved a serious agricultural pest in certain districts. The damage hitherto recorded has been done by the adult weevils, which live on the ground, hiding among the loose clods in the fields and nibbling off the young germinating plants during the first four or five days of their growth in the spring. The crops that are more particularly attacked are wheat, peas and gram, and less frequently barley. In some cases crops have had to be planted three times over on account of the attacks of these weevils. It is stated that they are attracted by the smell of *kaitha* and *bel* fruits, which are sometimes used by cultivators for trapping them (Ind. Mus. Notes, iii, 1893, p. 12; iv, 1899, pp. 123 and 188).

64. Tanymecus seclusus, *Fst.*

Tanymecus seclusus, Faust,* Ann. Mus. Civ. Genova, xxxiv, 1894, p. 178 (1895).

Very similar to *T. indicus*, Fst., and differing only in the following characters:—The rostrum is much shorter and broader, being broader than long; the forehead is broader and more convex, the narrowest space between the eyes being as broad as the base of the rostrum, whereas in *T. indicus* the latter part is slightly broader; the scape of the antennæ is rather more slender and more abruptly clavate; the prothorax is broadest before the middle and more strongly narrowed behind, so that the apex is not narrower than the base.

Length, 4¾–5¼ mm.; breadth, 1¾–2¼ mm.

BURMA: Bhamo (*Fea*); Kawkarit, Tenasserim (*Fea*); Paungde (*G. Q. Corbett*).

Types ♂ ♀ in the Genoa Museum.

65. Tanymecus versutus, *Fst.*

Tanymecus versutus, Faust,* Ann. Mus. Civ. Genova, xxxiv, 1894, p. 177 (1895).

I have seen only the type specimen of this species, which is a ♀. It is extremely close to *T. indicus*, Fst., from which it differs only in the following points:—The prothorax has a broad shallow constriction near the apex and its central carina is complete and rather more pronounced; the elytra are rather broader, being parallel-sided from the shoulders to beyond the middle; the anal segment has no median impression.

Whether these differences are really specific or merely individual cannot be decided without more material and an examination of the ♂ genitalia.

Length, 6 mm.; breadth, 2½ mm.

BURMA: Bhamo (*Fea*).

Type ♀ in the Genoa Museum.

66. **Tanymecus tetricus**, *Fst.*

Tanymecus tetricus, Faust,* Deut. Ent. Zeit. 1897, p. 349.

This is another very close ally of *T. indicus*, Fst., from which it differs only in the following points:—The eyes are slightly more prominent and less elongate, being evidently shorter that the rostrum; the forehead is more flattened; the scrobe is narrower, more angulate and not clothed with scaling; the scales are broader and coarser, and the setæ are therefore more evident, especially on the under surface; the anal segment of the ♀ has no median impression; the ♂ organ is sharply pointed at the apex, whereas it is broadly rounded in *indicus*.

Length, 5¼–6½ mm.; breadth, 2–2¾ mm.

BURMA: Tharrawaddy and Taung-ngu (*G. Q. Corbett*); Rangoon (*L. Fea*). ASSAM: Mangaldai dist. (*S. W. Kemp*—Ind. Mus.). BENGAL: Sahibganj (*J. Wood-Mason*—Ind. Mus.); Madhupur (*C. A. Paiva*—Ind. Mus.); Barwa, Chota Nagpur (*Cardon*); Balighai, near Puri, Orissa (*F. H. Gravely*). CENTRAL PROVINCES: Nagpur (*E. d'Abreu*). BOMBAY: Igatpuri, W. Ghats (Ind. Mus.); Belgaum (*H. E. Andrewes*—type); N. Kanara (*T. R. D. Bell*). MADRAS: Coimbatore (Pusa Coll.); Bellary (*De Morgan*).

Types ♂ ♀ in the British Museum.

The examples from Chota Nagpur are broader and more robust than those from the other localities, but there is no difference in the ♂ genitalia.

67. **Tanymecus parvus**, *Desbr.*

Tanymecus parvus, Desbrochers des Loges,* C. R. Ent. Belg. xxxv, 1891, p. ccclv.

Colour black, with variegated grey and brown scaling, sometimes with a coppery reflexion; a faint paler central line on the head and prothorax, the latter also with a broader lateral stripe of grey or pale brown; a few pale metallic scales at the apex of the rostrum.

Eyes short oval, rather prominent. ***Rostrum*** scarcely as long as broad, very shallowly sinuate at the apex, plane above and with a fine central carina. *Antennæ* ferruginous, with the scape slender, abruptly clavate, very strongly curved and far exceeding the posterior margin of the eye, the funicle with joint 1 longer than 2. *Prothorax* scarcely longer than broad, its sides rounded, broadest before the middle, the apex not narrower than the base; with large, coarse, sometimes confluent punctures, which are more or less visible through the scaling, and rarely with a slight central carina. *Elytra* comparatively broad, parallel-sided to beyond the middle, the apices separately rounded, finely punctato-striate, the striæ not deeper behind, the posterior callus obsolescent; the scaling dense, the setæ minute and depressed. *Legs* with dense grey scaling, the tibiæ not denticulate internally.

Anal segment of ♀ about twice as broad as long, the apex broadly rounded and scarcely raised, without impressed lines.

Length, 4–4½ mm.; breadth, 1¾ mm.

BENGAL: Chota Nagpur (*Cardon*—type); Calcutta (*F. H. Gravely*—Ind. Mus.); Barakpur (Pusa Coll.). MADRAS: Coimbatore; Pondicherry (*Maindron*).

Type in the Dresden Museum.

The long scape and the coarsely punctured thorax will at once distinguish this species from *T. indicus* and its allies.

68. **Tanymecus curviscapus**, sp. nov.

Colour black, with dense greyish-brown scaling, the sides of the prothorax yellowish brown, the scutellum entirely whitish, the elytra often irregularly variegated with a few whitish scales.

Eyes large, oval, moderately prominent, as long as the rostrum (excluding the mandibles). *Rostrum* scarcely as long as broad, very shallowly excised at the apex, the dorsal surface plane and with a distinct fine central carina, which encroaches on the forehead. *Antennæ* dark piceous, the scape moderately stout, very strongly curved, slightly compressed, gradually clavate, sparsely punctate, and markedly exceeding the hind margin of the eye; the funicle with joint 1 evidently longer than 2, the remainder short and subequal, not or only just as long as broad, 6 and 7 broader than the rest. *Prothorax* about as long as broad, the sides rounded, broadest before the middle, a shallow constriction near the apex, which is a little narrower than the base; with large shallow separated punctures and minute scattered punctures on the interspaces, without any central carina, the sculpturing entirely hidden by the scaling. *Elytra* comparatively broad, parallel-sided to beyond the middle, the shoulders prominent and almost rectangular, the apical area bluntly produced in the ♂, the apices being separately rounded; more acuminate in the ♀, terminating in short sharp apical processes, which may be parallel or incurved; with shallow striæ containing large separated punctures, but when the scaling is intact the striæ appear very fine and scarcely deeper behind, the punctures being indicated by mere points, the intervals plane and coriaceous, with irregular short recumbent yellowish setæ; an impression below the posterior callus. *Legs* with dense grey scaling and a fringe of rather long grey hairs on the coxæ and beneath the femora, the tibiæ not denticulate internally.

Anal segment of ♀ about twice as broad as long, the apex elevated and very broadly rounded, without impressed lines.

Length, 4½–5 mm.; width, 1½–2 mm.

BENGAL: Calcutta (*F. H. Gravely*—Ind. Mus.). CEYLON: Batticaloa (*C. F. S. Baker*—type).

Type ♀ in the British Museum.

69. **Tanymecus modicus**, sp. nov.

Colour black, with fairly dense greyish-brown scales, sometimes having a slight coppery reflexion, and mottled with darker patches.

Head with coarse reticulate punctures, the vertex convex, the forehead quite flat, with the rostral carina only just encroaching on it; eyes large and prominent, almost circular. *Rostrum* a little longer than broad, evidently dilated towards the apex, which is shallowly emarginate in the middle, the upper surface with coarse reticulate punctures, rather deeply impressed and with a prominent sharp carina. *Antennæ* black, the scape stout, strongly curved, compressed, gradually clavate, and considerably exceeding the hind margin of the eye; the funicle with joint 1 only slightly longer than 2, joints 3, 5 and 7 about equal in length, the two former subquadrate, 7 transverse, 4 and 6 longer and equal. *Prothorax* about as long as broad, the sides straight and subparallel for more than half their length and slightly narrowed at the extreme base and more so at the apex in the ♀, rather more rounded in the ♂, with coarse reticulate punctation which is partially visible through the scaling, a shallow rounded impression on each side behind the middle, and a mere trace of a carina. *Elytra* shaped as in *T. curviscapus*, but the shoulders more oblique and the apices without any process in the ♀; the striæ rather broad and shallow and scarcely deeper at the apex, containing large shallow punctures which can readily be seen through the scaling in certain lights, the intervals not broader than the striæ, slightly convex and coriaceous, the setæ short, recumbent and inconspicuous, the posterior calli distinct. *Legs* with grey scaling, forming a narrow denser band on the posterior femora, the tibiæ not denticulate.

Anal segment of ♀ longer than half its basal width, the apex broadly rounded and scarcely raised, without impressed lines.

Length, 6¾ mm.; width 2¼ mm.

BENGAL: Sarda (*F. W. Champion*—type). MADRAS: Samalkot (*G. R. Dutt*).

Type ♂ in the British Museum.

70. **Tanymecus konbiranus**, sp. nov.

Colour black, with uniform brownish-grey scaling, which is paler at the sides and beneath.

Eyes slightly prominent, very shortly ovate. *Rostrum* as long as broad, shallowly sinuate at the apex and with a fine central carina. *Antennæ* with the scape slightly curved and extending well beyond the posterior margin of the eye, the funicle with joint 1 only a little longer than 2. *Prothorax* evidently longer than broad, its sides slightly rounded, broadest rather behind the middle, the apex scarcely narrower than the base, finely and confluently punctate, with a shallow transverse stria close to the apex and a median longitudinal impression at the base. *Elytra* elongate, subparallel to beyond the middle, the apices divergently pointed, distinctly punctato-striate, the striæ not deeper behind, stria 9 not impressed, the posterior callus faint; scaling rather thin, the scales being small and narrow, the setæ minute. *Legs* rather stout, with thin scaling, the femora and tibiæ with long pale erect hairs on their lower surface, the tibiæ not denticulate.

Anal segment of the ♂ almost as long as broad and with a median impressed line; the second abdominal segment a little shorter than 3 and 4 together; the ♂ organ produced at the apex into a long narrow asymmetrical spatula curved up at the end.

♀ unknown.

Length, 7½ mm.; breadth, 2¾ mm.

BENGAL: Chota Nagpur (*Cardon*).

Type ♂ in the Brussels Museum.

Though superficially resembling the *indicus* group, the shortness of the second abdominal segment and the structure of the ♂ genitalia distinguish it from all the other species of Indian *Tanymecus*; in these and other respects it is nearly allied to the African *inafectatus*, Fhs.

71. **Tanymecus agrestis**, *Fst.*

Tanymecus agrestis, Faust,* Ann. Soc. Ent. Belg. xliii, 1899, p. 394, note.

Colour black, variegated with rather sparse grey and brown scaling and with comparatively long erect setæ.

Eyes rather prominent and almost circular. *Rostrum* very short, broader than long, with a broad angular emargination at the apex, flat above and with a fine central carina. *Antennæ* with the scape slender, strongly curved, abruptly clavate and exceeding the posterior margin of the eye, joint 1 of the funicle longer than 2. *Prothorax* as long as broad, its sides rounded, broadest before the middle, the apex as broad as the base; the upper surface coriaceous, without any central carina, but with a faint shallow impression on each side behind the middle. *Elytra* with the shoulders rectangularly prominent, the sides parallel to beyond the middle, acuminate behind, the apices being shortly and divergently mucronate; with comparatively deep and closely punctured striæ, the intervals (when the scaling is removed) scarcely broader than the striæ and slightly convex, stria 9 impressed, the posterior callus absent. *Legs* rather slender, black, with sparse grey scaling and erect pale setæ.

Anal segment of ♀ without the basal raised lines and rounded at the apex.

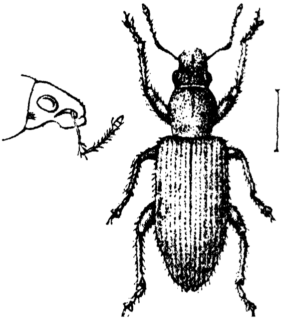

Fig. 33.—*Tanymecus agrestis*, Fst.

Length, 5½–6½ mm.; breadth, 2–2½ mm.

BURMA: Tharrawaddy (*G. Q. Corbett*). W. BENGAL: Chota Nagpur (*Cardon*) UNITED PROVINCES: Sura Bagh, Dehra Dun.

Type in the Dresden Museum.

The last ventral segment of the ♂ is deeply bisinuate at the apex, a character which I have not observed in any other species in the genus.

72. **Tanymecus lectus**, sp. nov.

Colour black, with fairly dense pale scales having a light greenish or coppery reflexion, the prothorax with three faint darker subdenuded stripes, the scaling on the elytra becoming indefinitely paler towards the sides.

Head rather rugosely punctate, the vertex with a distinct convexity in the middle, the forehead plane and with a fine central carina continued from the rostrum; eyes ovate, very prominent, their greatest depth behind the middle. *Rostrum* broader than long, the apex deeply emarginate, with a broad median depression in front, and a distinct fine central carina which disappears in the depression; mandibles not projecting beyond the genæ. *Antennæ* red-brown, slender; the scape only slightly curved, clavate, reaching the hind margin of the eye; the funicle with joint 2 a little longer than 1. *Prothorax* subcylindrical, as long as broad (♂) or slightly broader than long (♀), the sides very slightly rounded, the apex as broad as the base, which is truncate, transversely rugose, with minute granules between the scales, but without any central carina. *Elytra* short, narrow in the ♂, much broader in the ♀, the shoulders very sloping, not very acuminate behind, the apices shortly mucronate in the ♀, but not in the ♂, the narrow punctate striæ more or less hidden by the scaling, the intervals finely rugose, with numerous short curved white setæ, the posterior callus indistinct, and stria 9 not impressed. *Legs* dark brown, the tarsi paler, the femora with scattered scales and pale setæ, the tibiæ with setæ only and not denticulate in either sex.

Anal segment of ♀ with the basal striæ, the apex rounded.

Length, 5½–7 mm.: breadth, 2–3 mm.

E. BENGAL: Goalbathan (*R. Hodgart*—Ind. Mus.).

Type ♂ in the British Museum (without exact locality), ♀ in the Indian Museum.

73. **Tanymecus verlorenii**, *Voll.* (fig. 24, *m*).

Macropterus verlorenii, Vollenhoven, Tijds. Ent. 1871, p. 101, pl. 4, fig. 1; Faust, Stett. Ent. Zeit. 1892, p. 50.

Cercophorus floccosus, Chevrolat,* Ann. Soc. Ent. France, 1880, p. 259.

Cercophorus fistulosus, Chevrolat,* l. c.

Cercophorus crassipes, Chevrolat,* l. c.

Tanymecus penicillatus, Desbrochers des Loges, C. R. Ent. Soc. Belg. 1891, p. ccclv, note 1.

Tanymecus (*Cercophorus*) *verlorenii*, Faust, Stett. Ent. Zeit. 1892, p. 50; id., Ann. Mus. Civ. Genova, xxxiv, 1894, p. 184 (1895).

Colour uniform green with a slight metallic reflexion, above and below, sometimes with an orange lateral stripe on the elytra. *Eyes* slightly prominent and broadly ovate. *Rostrum* very shallowly emarginate at the apex and with a fine central carina. *Antennæ* with the scape reaching or slightly exceeding the posterior margin of the eye, the funicle with the two basal joints equal. *Prothorax* longer than broad, its sides subparallel from the base to beyond the middle, then narrowed to the apex, finely scrobiculate and with or without a fine central carina. *Elytra* rather

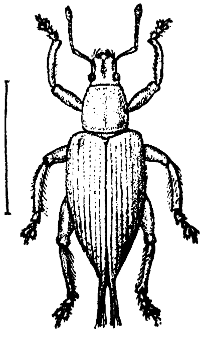

Fig. 34.—*Tanymecus verlorenii*, Voll., ♂.

broad, roundly acuminate, the ♀ with a very short apical mucro, those of the ♂ very long (1¼–1¾ mm.) and terminating in a long tuft of orange hairs; with distinctly punctate striæ which are not deeper at the apex, stria 9 not impressed, the posterior callus obsolete; the scaling very dense, the setæ dense and depressed. *Legs* black, with dense green scaling, much thicker in the ♂ than in the ♀ and having long reddish hairs on the inner edges of the femora and tibiæ, and especially on the outer edge of the intermediate tibiæ.

Anal segment of ♀ much broader than long, rounded at the apex and without any basal lines; metasternum with a longitudinal lateral impression in both sexes.

Length, ♂ 11½–13, ♀ 8–10½ mm.; breadth, ♂ 4½–5, ♀ 3–4¼ mm.

BURMA: Shwegu (*Fea*); Paungde and Tharrawaddy (*Corbett*). SIAM. MALAY PENINSULA. JAVA (type).

Type — location unknown; Chevrolat's types are at Stockholm and that of *penicillatus* in Coll. Desbrochers des Loges.

74. **Tanymecus chloritis**, *Fst.* (fig. 24, *n*).

Cercophorus chloritis, Faust,* Ann. Mus. Civ. Genova, xxxiv, 1894, p. 184 (1895).

Colour bright metallic-green, or blue-green, with a yellowish lateral stripe on the prothorax and elytra.

Very closely allied to the preceding species; the prothorax has only a faint trace of a carina, which is never sharply developed as in *verlorenii*; the elytra are more rapidly narrowed behind, their sides are less rounded in the ♂ and their apices are not mucronate in either sex, but are obliquely truncate, the ♂ having a small tuft of hairs, and the upper surface is less convex; the inner edges of the tibiæ have no long red hairs, but there are patches of long depressed orange hairs on the two anterior pairs of femora in the ♂, and a fringe of still longer depressed hairs on the outer edge of the intermediate tibiæ.

Length, ♂ 9½–11, ♀ 8–9¾ mm.; breadth, ♂ 3½–4¼, ♀ 3–4 mm.

BURMA: Paungde and Tharrawaddy (*G. Q. Corbett*); Rangoon (*E. T. Atkinson*).

Types ♂ ♀ in the Genoa Museum.

Genus **PHACEPHORUS**.

Phacephorus, **Schönherr, Gen. Curc. vi, pt. 1, 1840, p. 244; Lacordaire, Gen. Col. vi, 1863, p. 87.**

TYPE, *Phacephorus vilis*, Fhs.

Head **short, the eyes large, lateral and not prominent. *Rostrum* not or but little longer than the head, angular, flattened above, the apical area declivous and clothed with small shiny scales, the front margin shallowly sinuate in the middle; scrobes entirely**

lateral, wide and shallow behind; mandibles projecting well beyond the genæ, with conspicuous scars. *Antennæ* short and stout, the scape curved and gradually thickened, of variable length; the funicle with the first joint the longest, the remainder short, for the most part transverse; the club narrowly ovate, sharply acuminate. *Prothorax* truncate in front, rounded at the sides and base, with well developed vibrissæ, the anterior coxæ nearer the front margin of the prosternum. *Scutellum* small but distinct, varying in shape. *Elytra* oblong, not very convex, considerably broader than the prothorax at the shoulders which are rounded, jointly sinuate at the base, the apices dehiscent. *Legs* moderately long; the anterior tibiæ arcuate internally and not denticulate, the hind pair with the corbels open and ascending the dorsal margin; the tarsi entirely or almost entirely setose beneath, the third joint not broader than the second, the claws free. *Venter* with the intercoxal process very broad and rounded, segment 2 longer than 3 and 4 and separated from 1 by a sinuate incision, 3 and 4 angulate externally.

Range. North Africa, Southern Europe, Asia Minor, India, Siberia, and China.

Key to the Species.

Scape reaching the hind margin of the eye; prothorax with the base scarcely broader than the apex: third joint of hind tarsi not broader than second; elytra vaguely mottled with brown . .	*argyrostomus*, Gyl.
Scape reaching only the middle of the eye; prothorax much narrower at apex than at base; third joint of hind tarsus broader than second; each elytron with a large transverse black patch.	*bimaculatus*, sp. n.

75. Phacephorus argyrostomus, *Gyl.*

Tanymecus argyrostomus, Gyllenhal, Schönh. Gen. Curc. vi, pt. 1, p. 231 (1840).
Phacephorus russicus, Faust, Deut. Ent. Zeit. 1885, p. 181.

Colour piceous, with very dense overlapping opaque grey scaling, which almost entirely hides the integument, and with dense recumbent stout brownish and grey setæ; the rostrum with a patch of small contiguous shiny whitish scales at the apex, the elytra with irregular and faint brownish patches on the disk, the scutellum whitish.

Head with close shallow punctures (hidden), a tuft of erect setæ above each eye. *Rostrum* subquadrate, not longer than the head, plane above, with a very fine central carina. *Antennæ* piceous, with dense grey scaling and recumbent setæ; the scape reaching the hind margin of the eye; the funicle with joint 2 much shorter than 1 and about as long as broad, 3-7 subequal and transverse. *Prothorax* as long as broad, the sides moderately rounded, broadest before the middle, a shallow constriction near the apex, the basal margin somewhat curved and slightly elevated, the base scarcely broader than the apex; the upper surface closely and rugosely punctate throughout, but only some small scattered granules are visible through the scaling. *Elytra* oblong-ovate, jointly sinuate at the base, very gradually narrowed from the shoulders in the ♂, more parallel-sided in the ♀, the divergent apices slightly pointed; the disk rather flattened, with shallow punctate striæ, which appear merely as fine lines when the scaling is intact, the intervals broad, plane and finely rugose, the posterior calli distinct. *Legs* with dense opaque grey scaling, variegated with brown and grey recumbent setæ. *Venter* with dense grey scaling and numerous recumbent glistening pale setæ.

Length, 8½–10 mm.; breadth, 3–3¾ mm.

SIND: Haiderabad (*T. B. Fletcher*—Pusa Coll.). PERSIA. SOUTH RUSSIA. SIBERIA. N. CHINA.

I have seen only a single Indian specimen of this widely-spread Palæarctic species.

76. **Phacephorus bimaculatus**, sp. nov.

Colour black, with variegated grey and brown or grey and black scaling, with the following subdenuded black markings:—On the prothorax, a median diamond-shaped patch on the anterior half, with two faint dots on each side of it, and two ill-defined spots at the base; on the elytra, a large transverse patch before the middle between the striæ 2 and 6, with a small dot of pale scales in its outer anterior corner.

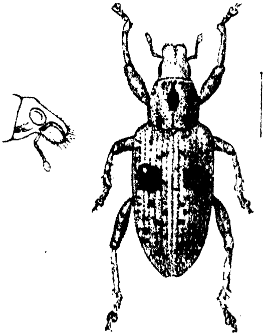

Fig. 35.—*Phacephorus bimaculatus*, Mshl.

Eyes large, not prominent, the dorsal edge of the orbit slightly produced over them and bearing a row of short erect setæ; the forehead with a broad and deep transverse impression. *Rostrum* not emarginate at the apex and with a well-defined central carina which ascends the forehead; mandibles not prominent. *Antennæ* very short, with the scape reaching only the middle of the eye, the funicle with joint 1 much longer than 2. *Prothorax* a little longer than broad, its sides subparallel from the base to about the middle, then gradually narrowed to the apex, with distinct confluent punctation and without any central carina. *Elytra* not acuminate behind, the sides subparallel to beyond the middle, the apices jointly excised, finely punctato-striate, the striæ not deeper apically, the posterior callus present; the scaling fairly dense, the setæ short and subdepressed. *Legs* black, with grey scaling variegated with darker spots, the tibiæ not denticulate internally.

Length, 7–7¼ mm.; breadth, 3 mm.

BENGAL: Pusa (*Lefroy*).

Type ♀ in the British Museum.

Genus **ANEMEROIDES**, nov.

TYPE, *Anemeroides erinaceus*, sp. nov.

Head with the forehead projecting slightly over the eyes, which are entirely lateral and moderately convex. *Rostrum* much longer than the head and continuous with it, the base narrower than the forehead, the upper surface plane, the margins angulated, the apex not emarginate; the scrobes lateral, deep, narrow and curving downwards at some distance in front of the eye; mandibles and mentum as in *Atmetonychus*, but the latter more depressed. *Antennæ* with the scape slender at the base, rapidly clavate and just reaching the eye; the funicle with the two basal joints slightly longer than the following and subequal, 3–6 equal, transverse and closely set, 7 much longer, subconical and attached to the club, which is short and broadly ovate. *Prothorax* truncate at the base and apex, the gular margin distinctly sinuate. *Scutellum* small. *Elytra* with the basal margin jointly sinuate and with a reflexed edge, much broader than the prothorax at the shoulders, with 10 striæ, the posterior declivity gradually sloping, the lateral margin shallowly sinuate above the hind coxæ. *Sternum* with the front coxæ nearer the anterior edge of the prosternum; mesosternum with the epimera nearly as large as the episterna, the median coxæ unusually far apart, the intercoxal piece almost as broad as the coxæ; metasternum much longer than the median coxæ, the episterna distinct, the hind coxæ reaching the edge of the elytra. *Venter* with the intercoxal piece truncate and broader than the coxæ, segment 2 much longer than 3 and 4 and separated from 1 by a deeply sinuate incision, 5 with a large central tubercle (? ♂ only). *Legs* slender, the femora feebly clavate; the tibiæ almost straight, the anterior pairs produced inwardly at the apex, the hind pair with the corbels enclosed and not ascending the dorsal edge; tarsi narrow, joint 3 scarcely broader than 2, 4 elongate and with two large free claws.

Range. India.

77. Anemeroides erinaceus, sp. nov.

Colour black, with brown scaling, which on the elytra is variegated with grey and whitish spots, especially at the sides; on the disk there is a broad darker band running obliquely from the shoulder to near the suture and a broad transverse dark band behind the middle; upper surface with short erect setæ.

Head plane, longitudinally rugose and with a short central furrow. *Rostrum* longer than broad, very slightly broadened towards the apex, the upper surface plane, with a large deep central impression at the base and four longitudinal carinæ. *Prothorax* a little broader than long, its sides straight and very gradually narrowed from the base till quite close to the apex, where they are sharply constricted so as to form a distinct lateral angulation; the upper surface very rugose, with irregular deep confluent foveæ. *Elytra* oblong-ovate, the shoulders sloping, but with the humeral angle obtusely prominent, the sides scarcely rounded, acuminate behind, the apices divergent and each with a very short sharp mucro; below and behind the humeral tubercle is a low rounded elevation, followed by a shallow impression; the striæ deeply punctate, the intervals about as broad as the striæ (when the scaling is intact), slightly convex and with rows of erect white setæ. *Legs* with dense brown scaling and long setæ, the tibiæ with one, the femora with two or three dark bands.

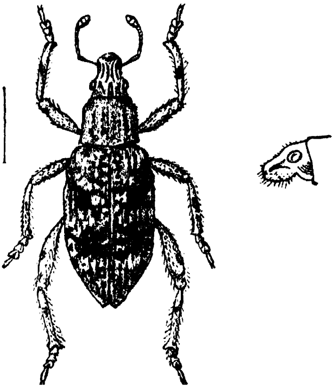

Fig. 36.—*Anemeroides erinaceus*, Mshl.

Length, 7½ mm.; breadth, 3½ mm.

INDIA.

Type ♂ in the British Museum.

Genus **ATMETONYCHUS.**

Atmetonychus, Schönherr, Gen. Curc. vi, pt. 1, 1840, p. 214; Lacordaire, Gen. Col. vi, 1863, p. 85.

TYPE, *Curculio peregrinus,* Oliv.

Head with the forehead projecting laterally above the eyes, which are lateral and very prominent. *Rostrum* continuous with and about twice as long as the head, plane above, angulate laterally, triangularly emarginate at the apex; the scrobes deep, gently curved, passing below the eye and there becoming wider and shallower; mandibles not prominent, with a distinct scar; the mentum large, quite filling the cavity, the submentum with no peduncle. *Antennæ* with the scape short, stout, gradually clavate and just reaching the eye; the funicle with the two basal joints a little longer than the rest, 1 longer than 2, 3–7 subequal, transverse and closely set, the club 4-jointed and sharply acuminate. *Prothorax* bisinuate at the base, vertically truncate at the apex, the gular margin not sinuate. *Scutellum* small. *Elytra* subtruncate at the base, much broader than the prothorax at the shoulders, which are roundly rectangular, and gradually narrowing from there to the apex, with 10 shallow sulci, the margins broadly sinuate above the hind coxæ, the posterior declivity sloping gradually. *Sternum* with the front coxæ in the middle of the prosternum; mesosternum with the epimera large, almost as long as the episterna; metasternum longer than the median coxæ, the episterna distinct and fairly broad, the hind coxæ not reaching the elytra. *Venter* with the intercoxal process rounded and not broader than the coxæ, segment 2 longer than 3 + 4 and separated from 1 by a curved incision. *Legs* with the hind femora not clavate, the median and front pairs moderately so; the tibiæ almost straight, the front pairs produced internally at the apex, the hind pair with the corbels open and ascending the dorsal edge for a short distance; the tarsi rather narrow, joint 2 triangular and longer than broad, 3 not or but slightly broader than 2, 4 elongate and with a single long claw.

Range. Northern India.

78. **Atmetonychus peregrinus,** *Oliv.*

Curculio peregrinus, Olivier, Entom. v, 83, 1807, p. 324, pl. 24, f. 349.
Curculio rugosus, Wiedemann,* Germ. Mag. iv, 1821, p. 155.
Anæmerus peregrinus, Gyllenhal, Schönh. Gen. Curc. ii, 1834, p. 75.
Atmetonychus inæqualis, Boheman,* Schönh. Gen. Curc. vi, pt. 1, 1840, p. 214.

Colour black, with uniform grey or brownish scaling, the underparts paler.

Head very transverse, constricted behind the eye, the forehead with a deep central furrow and a broad shallow one on each side of it. *Rostrum* almost parallel-sided in the ♂, strongly narrowed from the base to the middle in the ♀, the base narrower than the forehead, plane above, with a deep central furrow and a broader curved one on each side of it. *Prothorax* a little broader than long, broadest at the base, the posterior angles acute, the sides almost straight and narrowing from base to apex, the anterior angles shortly but acutely projecting, the upper surface very rugose and uneven, with a deep central depression. *Elytra* gradually acuminate behind, the apices separately mucronate, with shallow sulci containing large deep punctures, the intervals narrow and very uneven, with short subdepressed setæ, which are often denser and longer in small irregular patches. *Legs* black, with grey scaling, the upper edges with dense short setæ, the lower with much longer setæ, the femora rugosely punctate.

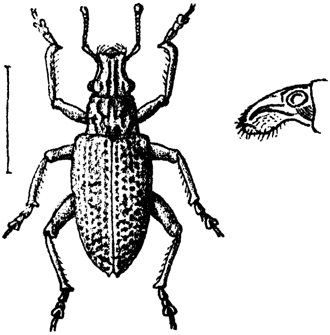

Fig. 37.—*Atmetonychus peregrinus*, Oliv.

Length, 10–12 mm.; breadth, $4\frac{1}{4}$–$5\frac{1}{4}$ mm.

BENGAL: Calcutta (Ind. Mus.); Dacca; Pusa (*Lefroy*); Chapra (*Mackenzie*—Pusa Coll.). PUNJAB: Umballa (*Lefroy*).

Type in the Paris Museum; of *C. rugosus* at Copenhagen and of *A. inæqualis* at Stockholm.

A. inæqualis, Boh., was described from a very large specimen, but I could find no characters by which it could be distinguished from Olivier's species.

Genus **ANEMERUS**.

Anæmerus, Schönherr, Disp. Meth. 1826, p. 126; Lacordaire, Gen. Col. vi, 1863, p. 84.

TYPE, *Curculio tomentosus*, F. (Africa).

Head plane, with a deep central furrow, the forehead produced laterally above the eyes, which are oval, convex and entirely lateral. *Rostrum* more or less deflected, longer than the head and continuous with it, the base not broader than the forehead, plane above, the margins angular, the apex shallowly emarginate; the scrobes deep, curving sharply downwards in front of the eye and becoming broader and shallower below; mandibles with a conspicuous and slightly projecting scar; the mentum large and filling its cavity, sometimes with a trace of a peduncle to the submentum. *Antennæ* inserted nearer the apex, the scape gradually thickened, the funicle with joint 1 longer than the others, 2–7 short, closely set and more or less transverse, 7 sometimes more elongate, subconical and annexed to the club, which is small, 4-jointed and sharply acuminate. *Prothorax* obliquely (or vertically) truncate at the apex, truncate (or shallowly bisinuate) at the base, the anterior edge with conspicuous vibrissæ below the eye, the gular margin truncate (or rather deeply sinuate). *Scutellum* distinct, triangular. *Elytra* elongate (or broadly oblong-ovate), the base subtruncate, broader than the prothorax at the shoulders, the posterior declivity sloping, with 10 striæ, the lateral margin shallowly sinuate. *Sternum* with the front coxæ in the middle of the prosternum, the mesosternum with the epimera large; metasternum evidently longer than (or equal to) the median coxæ, the episterna distinct, the hind coxæ not reaching the elytra. *Venter* with the intercoxal process ogival (or truncate), segment 2 as long as or longer than 3 + 4 and separated from 1 by a curved incision. *Legs* elongate, the femora not or only slightly clavate; the tibiæ almost straight, the two front pairs with an internal apical spine, the hind pair with the corbels open; the tarsi linear, joint 3 not or scarcely broader than 2, 4 elongate and with two connate claws.

Range. Tropical Africa, Burma.

The characters given in brackets are all peculiar to the single Eastern species as compared with the typical African forms.

79. **Anemerus cerberus**, *Fst.*

Anæmerus cerberus, Faust,* Ann. Mus. Civ. Genova, xxxiv, 1894, p. 171 (1895).

Colour black, with uniform earthy-brown scaling, and with short stiff erect setæ.

Head with a central furrow which is subinterrupted in the middle and broader behind, on each side of it a very large deep impression, the supra-ocular ridges broad, obtuse and strongly raised. *Rostrum* a little longer than broad, its sides subparallel, with a deep oval central impression and a broad furrow on each side of it which is interrupted towards the apex by a narrow oblique carina. *Prothorax* transverse, its sides parallel from the base to the middle, then subangularly dilated and narrowed again to the apex, which is narrower than the base; the upper surface rugosely impressed, there being a broad central furrow, angularly dilated in the middle, with an irregular row of three large impressions on each side of it and several transverse lateral plications. *Elytra* rather short and broad, the shoulders sharply rectangular, the sides parallel from there to behind the middle in the ♀, rather more narrowed in the ♂, the apices with a short blunt mucro; with shallow broad sulci containing rows of large deep foveæ, the intervals narrow and rather undulating, the alternate ones elevated and uneven; the scaling dense, with scattered patches of short white erect setæ. *Legs* with dense brownish scaling and numerous suberect setæ.

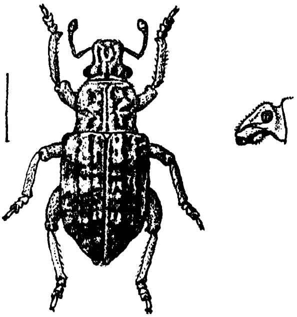

Fig. 38.—*Anemerus cerberus*, Fst.

Length, $6\frac{1}{2}$–$7\frac{1}{2}$ mm.; breadth, $3\frac{1}{4}$–$3\frac{3}{4}$ mm.

BURMA: Minhla (*Comotto*); Shenmasa (*Fea*); Mimbu (*Col. C. H. Adamson*).

Type in the Genoa Museum.

Genus **HYPOMECES.**

Hypomeces, Schönherr, Disp. Meth. 1826, p. 124; Lacordaire, Gen. Col. vi, 1863, p. 99.

TYPE, *Curculio squamosus*, F.

Head always with a central furrow, the eyes very prominent. *Rostrum* stout, longer than the head and continuous with it, its base not broader than the forehead, the apex with an angular emargination, the upper surface with a deep central furrow; the scrobes entirely lateral and curving downwards at some distance in front of the eye; the mandibles pincer-like, the scars large and conspicuous, that on the right mandible projecting on a short peduncle; mentum trapezoidal, concealing the maxillæ but not quite filling the buccal cavity, the submentum with a trace of a very short broad peduncle. *Antennæ* with the scape almost straight, gradually clavate and reaching about the middle of the eye, the funicle with the two basal joints a little longer than the rest, which become slightly broader outwardly, 7 a little broader but not longer than 6, the club distinctly 4-jointed and sharply acuminate, its two basal joints equal. *Prothorax* broadest at the base and continuously narrowed to the apex, the base bisinuate, the apex truncate and with distinct post-ocular vibrissæ. *Scutellum* distinct, triangular. *Elytra* oblong-oval, broader than the thorax and with obtuse shoulders, with 10 punctate striæ, the lateral edge emarginate near the base to receive the head of the metasternal episternum and shallowly sinuate above the posterior coxæ. *Sternum* with the front coxæ nearer to the anterior margin of the prosternum and with a large bifid tubercular prominence behind the coxæ; the mesosternum with the epimera and episterna of almost equal size; the metasternum much longer than the median coxæ, the episterna broad and distinct, the hind coxæ not reaching the elytra. *Venter* with the intercoxal process broadly rounded, segment 2 longer than 3 + 4, and divided from 1 by a sinuate incision which is shallower in the middle. *Legs* with the femora clavate; the tibiæ almost straight, except the front pair which are slightly bent inwards near the apex and have an internal apical process, the hind pair with the corbels open and ascending the dorsal edge for some distance; the tarsi broad, joint 4 elongate, the claws strongly connate; the trochanters with an isolated long projecting bristle.

Range. Eastern India, Burma, China and the Malay Archipelago as far as the Philippines and Timor.

The only constant difference in the sexes is to be found in the last ventral segment, which bears two short longitudinal sulci at the base in the ♀, that of the ♂ being simple. In *H. squamosus*, F., and *unicolor*, Weber, the sexes are of nearly the same shape, but the ♂ is clothed with long fine erect pubescence, which is lacking in the ♀. But in *H. inflatus*, Chev., from Flores, both sexes are pubescent, while the elytra of the ♀ are much broader than those of the ♂.

80. **Hypomeces squamosus**, *F.*

Curculio squamosus, Fabricius,* Ent. Syst. i, 2, 1792, p. 452.
Curculio pulverulentus, Fabricius,* l. c.
Curculio pulviger, Herbst, Käf. vi, 1795, p. 480.
Curculio aurulentus, Herbst, op. cit. vii, 1797, p. 13, pl. 96, f. 6.
Curculio orientalis, Olivier, Entom. v, 83, 1807, p. 321, pl. 6, f. 66.
Hypomeces squamosus, Boheman, Schönh. Gen. Curc. ii, 1834, p. 71.
Hypomeces fabricii, Faust,* Ann. Soc. Ent. France, 1892, p. 506 (1893) (n. syn.).
Hypomeces auricephalus, Faust, l. c. (n. syn.).
Hypomeces fabricii, Faust, var. *dispar*, Faust,* Ann. Mus. Civ. Genova, xxxiv, 1894, p. 184 (1895).

Colour black, with uniform dense glittering metallic green or blue-green scaling, often suffused with orange powdering (typical form); or else with the green scaling replaced by pale grey, pearly, brownish or dull coppery scaling.

Head plane on each side of the central furrow. *Rostrum* gradually narrowed from base to apex, the upper surface plane, with a broad and deep central furrow, a curved longitudinal impression on each side of it and a sharp lateral carina. *Prothorax* broadest at the base, much narrower at the apex, the sides almost straight, the posterior angles acute, the anterior angles produced into a short sharp tooth behind the eye; the upper surface unevenly depressed in the middle, with a variable central furrow and a more or less distinct curved transverse impression behind the middle. *Elytra* sinuate in the middle of the base, broadest at the shoulders and gradually narrowing behind, the shoulders rounded and rather sloping, the apices scarcely dehiscent, the punctation of the striæ rather variable, the intervals broad and plane, the ♂ with long fine erect pubescence, the ♀ with short subdepressed setæ.

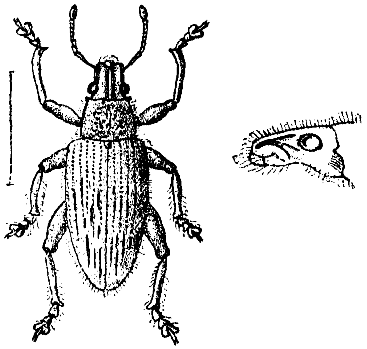

Fig. 39.—*Hypomeces squamosus*, F., ♂.

Length, 10¼–13 mm. : breadth, 4¼-5½ mm.

BURMA; SIAM; CAMBODIA; MALAY STATES; SUMATRA; JAVA; PHILIPPINES; CHINA.

Type in the Copenhagen University Museum, also that of *pulverulentus*; the types of Herbst and Olivier are apparently lost; those of *fabricii*, *auricephalus* and *dispar* are at Dresden.

Faust assumed that in describing *squamosus* Fabricius had before him the form in which the anterior angles of the prothorax are not prominent, but an examination of the type shows it to be of quite the same form as *fabricii*, Fst.

The name *pulverulentus*, F., may be applied to specimens exhibiting a grey or pearly coloration; *pulviger*, *orientalis* and *dispar* being practically synonymous with it. Coppery examples may bear the name *aurulentus*, Hbst.; while *auricephalus*, Fst., applies to green specimens in which the head and rostrum are coppery red.

81. Hypomeces unicolor, *Web.*

Curculio unicolor, Weber, Observ. Ent. 1801, p. 95; Fabricius,* Syst. El. ii, 1801, p. 511.
Curculio rusticus, Weber, l. c.; Fabricius,* op. cit. p. 510.

It is with some doubt that, in accordance with the opinion of

Faust, this species is here separated from *squamosus*, F., the only discriminative characters being the absence of the projecting tooth at the anterior angles of the prothorax and the greater curvature of the sides of the prothorax, especially in the ♂; but in some cases even these appear ambiguous.

Range similar to that of *squamosus*, but occurring also in Borneo, Flores and Timor.

Type. I am not aware that Weber's types have yet been traced with certainty; the specimens described by Fabricius from Daldorff's collection are in the Copenhagen University Museum, and it is not unlikely that they are the actual insects described by Weber.

This species exhibits the same range of colour variations as *squamosus*. The ♂ genitalia of both forms exhibit a certain amount of variation in length, curvature, etc., but no character has been found by which the two forms can be discriminated.

Genus **DEREODUS.**

Dereodus, Schönherr, Disp. Meth. 1826, p. 125; Lacordaire, Gen. Col. vi, 1863. p. 100.

Cataponus, Desbrochers des Loges, Le Frelon, i, pt. 1, 1891, p. 48.—Type, *C. curtulus*, Desbr.

Grypnus, Desbrochers des Loges, op. cit. p. 49, note.—Type, *Cataponus indicus*, Desbr. (= *D. sparsus*, Boh.).

TYPE, *D. denticollis*, Boh.

Resembling *Hypomeces*, except that the structure of the eyes is very variable, ranging from a moderately convex form in *denticollis*, Boh., to extreme prominence in *vigilans*, Mshl. *Antennæ* with joint 7 of the funicle always longer than 6 in the ♂ and generally so in the ♀, the club with the second joint longer than the first. *Prothorax* of variable shape, the base either slightly bisinuate or truncate, the anterior margin sometimes with a long post-ocular spine (*denticollis*). *Sternum* without any bifid tubercular prominence behind the anterior coxæ. *Elytra* of ♂ without woolly pubescence. *Legs* with the tarsi varying in width; the trochanters without the solitary long bristle.

Range. Similar to that of *Hypomeces*, but extending westwards throughout India, Ceylon, Arabia and Africa.

In spite of its somewhat heterogeneous appearance, I must agree with Faust that this genus cannot be satisfactorily subdivided.

Key to the Species.

1 (2) Anterior margin of prothorax with a curved spine projecting forwards below the eyes .... *denticollis*, Boh., p. 120.

2 (1) Prothorax without any curved spine.

3 (10) First joint of funicle longer than second; rostrum more or less narrowed from base to middle, its base broader than the narrowest part of the forehead.

4 (9) Eyes more or less convex, but not produced backwards; middle trochanters simple.

5 (8) Forehead transversely convex and higher than the upper surface of the eyes, which are oval; prothorax bisinuate at the base, the disk flattened, the impressions deep.

6 (7) Elytra coarsely punctate, the intervals narrower than the striæ, the dorsal outline strongly convex; eyes more prominent; elytra of ♂ narrowing behind from the shoulders .... *sparsus*, Boh., p. 121.

7 (6) Elytra more finely punctate, the intervals not narrower than the striæ, the dorsal outline much flatter; eyes less prominent; elytra of ♂ subparallel from the shoulders to the middle and less acuminate behind........ *pollinosus*, Redt., p. 121.

8 (5) Forehead flattened and on a level with the upper surface of the eyes, which are almost circular; prothorax truncate at the base, the disk convex, the impressions very shallow ...... *andamanensis*, sp. n., p. 122.

9 (4) Eyes very prominent and produced backwards; middle trochanters forming a laminate process behind, especially in ♂. *vigilans*, sp. n., p. 123.

10 (3) The two basal joints of the funicle subequal; rostrum with its sides subparallel, its base not broader than the forehead.

11 (12) Eyes very prominent, subconical; pronotum with two rounded foveæ in the middle of the disk; pale markings on elytra composed of fairly large rounded scales .... *mastos*, Hbst., p. 124.

12 (11) Eyes only moderately convex; pronotum with no discal foveæ; elytra with only a few scattered minute scales at the base, the remaining surface with dense fine recumbent setæ, the markings produced by yellow powdering .... *pulverosus*, sp. n., p. 125.

82. **Dereodus denticollis**, *Boh.*

Dereodus denticollis, Boheman,* Schönh. Gen. Curc. ii, 1834, p. 73.

Colour black, with grey scaling, having a lilac flush on the upperside, the prothorax with three narrow indistinct yellowish stripes.

Head convex, shallowly punctate and wrinkled, with a broad deep central furrow ascending to the vertex; eyes large, oval and only slightly convex. *Rostrum* a little broader than long, slightly narrowed from the base to the apex, the upper surface with a broad deep central furrow and a deep curved impression on each side of it, in front of which is a short oblique impression, the ante-ocular space with a longitudinal impression. *Antennæ* short and stout, joint 1 of the funicle longer than 2, 3–6 equal and transverse, 7 more strongly transverse. *Prothorax* broader than long, its sides subparallel from the base to well beyond the middle, then slightly narrowed to the apex, the basal margin strongly bisinuate, the apical margin with a sharp tooth of varying length projecting forward below the level of the eye; the upper surface coarsely and confluently punctate, with a shallow central furrow and a deep bisinuate transverse impression behind the middle. *Elytra* with the sides parallel from the shoulders to beyond the middle in the ♀, gradually acuminate from the shoulders in the ♂, the apices with a short mucro, the striæ with large deep punctures, the intervals not broader than the striæ and almost plane; the scaling dense, the setæ short and subdepressed.

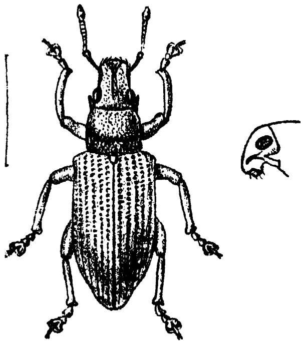

Fig. 40.—*Dereodus denticollis*, Boh.

Length, 9–12 mm.; breadth, $3\frac{3}{4}$–5 mm.

Bengal: Barkul, Orissa (*F. H. Gravely*—Ind. Mus.). Madras: Pondicherry (*Perrotet, Maindron*); Salem (*G. R. Dutt*—Pusa Coll.); Madras (*Capt. W. Patton*).

Type in the Stockholm Museum.

83. Dereodus pollinosus, *Redt.*

Hypomeces pollinosus, Redtenbacher,* Hügel's Kaschm. iv, pt. 2, 1848, p. 545.
Dereodus himalayanus, Faust,* Stettin. Ent. Zeit. 1891, p. 262.
Dereodus (*Grypnus*) *bengalensis*, Desbrochers,* Le Frelon, i, 1891, p. 50.

Colour black, with dense grey scaling (sometimes with a pinkish or yellowish reflexion) beneath and more sparse above; the head and prothorax with a denser lateral stripe of scaling, the latter also with a narrower central line; the elytra often mottled with darker patches.

Head, rostrum and *antennæ* as in *D. denticollis*, Boh., except that the eyes are smaller and more prominent, and the head is much more finely punctate. *Prothorax* as long as broad, its sides parallel from the base to beyond the middle, then slightly narrowed to the apex, the basal margin strongly bisinuate; the upper surface with scattered coarse punctation, a shallow central furrow, two foveæ close on each side of it about the middle and a curved transverse impression behind the middle. *Elytra* parallel-sided from the shoulders to beyond the middle, almost rounded behind, the apices with very short contiguous mucros, the striæ distinctly punctate, the punctures rather smaller towards the apex, the intervals not broader than the striæ and slightly convex, the posterior callus feeble; the setæ very short, fine and subdepressed.

Length, 8½–11½ mm.; breadth, 3½–4¾ mm.

UNITED PROVINCES: Mussoorie (*H. M. Lefroy*); Almora and Dalmoti, Kumaon; Thano, Sabhawala and Thadiar, 7000 ft., Dehra Dun. NEPAL: Dharampur, 5000 ft. (Ind. Mus.). PUNJAB: Simla (*Lady Prain*, *N. Annandale*); on apple, Kalu, Kangra dist.; on oak, Amritsar; Piuntra, Jabbal (*E. P. Stebbing*). KASHMIR (*von Hügel*—type). BALUCHISTAN: Suleiman Mts.

Type in the Vienna Museum; of *himalayanus* in the Dresden Museum; of *bengalensis* in Coll. Desbrochers des Loges.

Mr. Stebbing records that this species feeds on the leaves of *Zizyphus jujuba*, sometimes defoliating the trees.

84. Dereodus sparsus, *Boh.*

Hypomeces sparsus, Boheman,* Schönh. Gen. Curc. vi, pt. 1, 1840, p. 208.
Dereodus (*Grypnus*) *indicus*, Desbrochers,* Le Frelon, i, p. 49 (1891).
Dereodus sparsus var. *prasinus*, Heller,* Deut. Ent. Zeit. 1901, p. 340.

Colour black, with rather thin grey scaling, which is usually broken up into small irregular spots on the elytra; the prothorax usually with a narrow lateral pale line.

Very closely allied to *D. pollinosus*, Redt., which it replaces in Central and Southern India, and differing from it as follows:—

Head more coarsely punctate and wrinkled, the eyes rather more prominent. *Prothorax* evidently broader than long in the ♀, less markedly so in the ♂. *Elytra* more acuminate behind, especially in the ♂, more coarsely punctate and with the intervals narrower than the striæ in both sexes, the dorsal outline much more convex; the scales larger and less dense, almost circular, whereas in *pollinosus* they are oval or irregular.

The ♂ organ has the spatula less acute at the tip, and also presents a fine carina on the basal half of its convex surface which is lacking in *pollinosus*.

Length, 7½–10½ mm.; breadth, 3–4¼ mm.

W. BENGAL: Chota Nagpur (*Cardon*); Berhampur (*Atkinson*). BOMBAY: Gunji and Ghozeh, Belgaum (*H. E. Andrewes*). MADRAS: Pondicherry (*M. Maindron*); Trivandrum; Salem (*G. R. Dutt*—Pusa Coll.). CEYLON: Jaffna and Kegalla (*E. E. Green*); Anuradhapura, Bandarawella, Bentota, Dambulla, Habarana, Kanthaley, Kekirawa, Nalanda, Negombo and Trincomali (*Dr. W. Horn*).

Type in the Upsala University Museum; of *prasinus* at Dresden; of *indicus* in Coll. Desbrochers des Loges.

The variation with green scaling described by Dr. Heller seems to occur only in Ceylon; and it is noteworthy that a similar variation of *D. mastos*, Hbst., is also found in that island.

85. **Dereodus andamanensis**, sp. nov.

Colour black, with thin grey scaling, which is scarcely paler at the sides.

Head shiny, with sparse shallow punctures, the deep central furrow continued right up to the vertex, the forehead flattened transversely, so that (when looked at from in front) it is on the same level as the upper surface of the eyes, with a shallow longitudinal lateral impression separated by a ridge from the deep orbital groove; eyes very convex, almost circular. *Rostrum* as long as broad, much broader at the base than the forehead, strongly narrowed from the base to beyond the middle, the upper surface quite flat almost to the apex, with the usual deep central furrow, the curved lateral impressions comparatively shallow, and with no impression before the eye. *Antennæ* with the two basal joints of the funicle equal, the remainder slightly transverse, 7 a little longer. *Prothorax* subcylindrical, about as long as broad, the sides only slightly rounded, the apex but little narrower than the base, which is truncate; the upper surface much more convex and more shallowly impressed than in the other Indian species, with a fine central stria which is almost interrupted in the middle by a transverse smooth space, a very shallow transverse impression near the apex and a narrow one just behind the middle; the sculpturing composed of irregular shallow foveæ, the intervals being finely punctate. *Elytra* rather narrow (♂), the sides almost parallel from the rounded shoulders to beyond the middle, the base jointly sinuate, its margin distinctly raised, the apices very shortly and separately mucronate, the dorsal outline a little less convex than in *D. sparsus*; the punctures comparatively small and numerous, evidently diminishing behind, the intervals broader than the stria, the posterior callus distinct; the scales very small, convex and separated, the setæ microscopic and recumbent.

Length, 8½ mm.; breadth, 3 mm.

ANDAMAN IS. (*Sallé*).

Type ♂ in the Paris Museum.

This species finds its nearest allies in the African group represented by *D. marginalis*, Boh., which have the same kind of scaling and minute setæ. The scales never overlap, as they frequently do in most other Indian species, and under a Zeiss binocular $(a_3 \times 2)$ they appear convex and without sculpturing; in *denticollis*, *pollinosus*, *sparsus* and *mastos* they are much larger, slightly convex, and fluted, while in *vigilans* they are much more finely striate.

86. **Dereodus vigilans**, sp. nov.

Colour black, with dense brown and grey scaling, the underparts whitish; the prothorax grey, with a broad brown lateral stripe, edged internally by a whitish line; the elytra grey, or sandy grey, more or less mottled with brown.

Head plane, sparsely punctate and with a few fine wrinkles, the central furrow deep and ascending the vertex, the margin adjoining the eyes slightly elevated; eyes almost circular, extremely prominent and slightly curved backwards. *Rostrum* very little longer than its basal width, strongly narrowed from the base to the middle, thence parallel-sided to the apex, the central furrow deep, with a shallow curved impression on each side of it, the ante-ocular impression shallow and wrinkled. *Antennæ* more elongate, funicle with joints 3–7 not transverse but about as long as broad. *Prothorax* somewhat broader than long; in the ♂ the sides are straight and very slightly narrowed from the base to very near the apex, then more sharply narrowed, in the ♀ the sides are slightly rounded and more narrowed at the apex; the basal margin truncate, the upper surface with large deep punctures (almost hidden by the scaling), a very shallow ill-defined central furrow and a curved transverse impression behind the middle. *Elytra* parallel-sided from the shoulders to beyond the middle, broadly rounded behind, the apices not mucronate, the striæ deeply punctate, the punctures very much reduced in the apical half, the intervals a little broader than the striæ, the posterior callus distinct, the setæ short and subdepressed. *Legs*: the middle trochanters with a laminate process.

Length, ♂ 12–12½, ♀ 13½ mm.; breadth, ♂ 4⅝–4¾, ♀ 5⅝ mm.

MADRAS: Coimbatore and Mysore (Pusa Coll.); Bangalore (*J. Cameron*—Ind. Mus.).

Types ♂ ♀ in the British Museum.

87. Dereodus mastos, *Hbst.*

Curculio mastos, Herbst, Käf. vii, 1797, p. 17, pl. 96, fig. 6 (♂).
Hypomeces guttulatus, Desbrochers des Loges,* C. R. Ent. Soc. Belgique, 1891, p. ccclv (♀).

Colour shining black, variegated with whitish or greyish scaling (sometimes with a metallic tinge) as follows:—A denser stripe on each side of the head; a broad lateral stripe on the prothorax and an indistinct narrow central stripe; the elytra are variegated in the ♀ with small scattered spots and have sometimes an ill-defined broad lateral stripe; in the ♂ interval 1 is bare, intervals 2 and 3 have a continuous stripe of scaling uniting at the apex with a broad lateral stripe, intervals 4–6 and the base of 7 are either bare or more or less irregularly mottled with scaling.

Head shallowly punctate and with a single deep central furrow, the eyes very prominent, subconical and almost circular. *Rostrum* as long as broad, parallel-sided, with a deep central furrow, a broader shallow one on each side of it, and a longitudinal impression in front of the eye. *Antennæ* with the two basal joints of the funicle equal, 3–6 subequal, bead-like and slightly transverse, 7 a little longer and not transverse. *Prothorax* as long as broad, its sides subparallel from the base to the middle, then narrowing in a curve to the apex, the basal margin slightly bisinuate, the upper surface with shallow scattered punctation, with a broad irregular central furrow, a rounded fovea on each side of it about the middle and a broad curved transverse impression behind middle. *Elytra* slightly acuminate behind, much broader in the ♀, the apices shortly mucronate, the striæ deeply punctate at the base, the punctures greatly diminishing behind middle, the intervals narrower than the striæ at the base but broader behind.

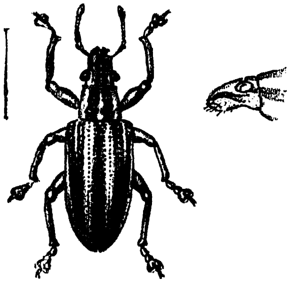

Fig. 41.—*Dereodus mastos*, Hbst., ♂.

Length, ♂ $8\frac{3}{4}$–$9\frac{1}{2}$, ♀ 10–$11\frac{1}{2}$ mm.; breadth, ♂ $3\frac{1}{4}$–$3\frac{3}{4}$, ♀ 4–$4\frac{3}{4}$ mm.

BENGAL: Tetara (*Cardon*). MADRAS: on *Acacia arabica*, Ganjam (*E. P. Stebbing*—Ind. Mus.); Manaparai (Pusa Coll.); Bangalore (*C. D. Gregson*); on *Hibiscus cannabina*, Coimbatore

(Pusa Coll.); Madura (*R. Barton Wright*); Genji (*Maindron*). CEYLON: Eppawela (*E. E. Green*); Hambantota (*T. B. Fletcher*).

Type lost; of *guttulatus* in the Brussels Museum.

88. **Dereodus pulverosus**, sp. n.

Colour dark red-brown, the head blackish; the head and prothorax with sparse white scaling, the latter with a broad lateral band of pale yellow powdering; the elytra without scaling, but with fine recumbent pubescence and with a broad ill-defined band of yellow powdering reaching laterally from the shoulder to beyond the middle and extending obliquely on to the disk almost as far as the suture.

Head slightly convex, with close shallow punctation and a deep central furrow ascending the vertex, the forehead as broad as the base of the rostrum; eyes almost circular and moderately prominent. *Rostrum* about as long as broad, parallel-sided, closely and shallowly punctate, with a deep central furrow and a curved shallow impression on each side of it, without any impression before the eye. *Antennæ* red-brown, the two basal joints of the funicle equal, 3 a little longer than 4, 7 not transverse. *Prothorax* rather broader than long, very slightly narrowed from the base to beyond the middle and then more rapidly narrowed to the apex, the basal margin bisinuate, the upper surface closely and finely punctate, with a broad central furrow and a shallow curved transverse impression behind the middle. *Elytra* gradually narrowed posteriorly from the shoulders, the apices with a short joint mucro, the striæ distinctly punctate, the dorsal punctures diminishing behind, the intervals slightly broader than the striæ, the posterior callus feeble; at the base the elytra slope rather abruptly and steeply forwards to their junction with the prothorax.

Length, $12\frac{3}{4}$ mm.; breadth, 5 mm.

INDIA (*Capt. Boys*).

Type ♂ in the Oxford Museum.

Genus DYSCHERES.

Dyscheres, Pascoe, Notes Leyd. Mus. v, 1883, p. 83.

TYPE, *D. agrestis*, Pasc. (Malay Archipelago).

From *Dereodus*, Schh., this genus can only be distinguished by the fact that the corbels of the hind tibiæ are not clothed with scales, nor do they ascend the dorsal edge of the tibia, and the trochanters are furnished with a solitary long projecting bristle. The species at present known also differ in having the posterior angles of the prothorax acutely prominent.

Range. Burma, and the Malay Peninsula and Archipelago.

In addition to the type and the single Burmese species only one other species is known, namely, *D. curtus*, Pasc., from Timor.

89. Dyscheres rugosus, *Pasc.*

Dyscheres rugosus, Pascoe,* Notes Leyd. Mus. v, 1883, p. 85, note.

Black, bare and shining, with the following markings formed of pinkish-white scales: a broad stripe on each side of the rostrum, extending right along the thorax and on to the base of the elytra; a large transverse humeral patch, sometimes broken up into a number of small spots; an irregular, usually much interrupted, transverse band about the middle, extending from the third sulcus to the margin; an irregular stripe along the posterior part of the suture, and a small transverse patch on each side near the apex; underparts entirely of the same colour.

Head with three very broad and deep furrows which are continued almost to the apex of the rostrum, strongly constricted behind the eyes, which are subpedunculate, very prominent and curved backwards. *Rostrum* as long as its width at the base, evidently narrowed from base to apex, deeply trisulcate and without any lateral impression in front of the eye. *Antennæ* with joint 1 of the funicle distinctly larger than 2, the latter scarcely as long as broad, the remaining joints strongly transverse and set closely together. *Prothorax* variable in its proportions, its length being either greater than, equal to or less than its width at base, the sides straight and nearly parallel in the ♂, slightly bisinuate and widening to the base in the ♀, the basal margin bisinuate, its external angles acutely prominent, the anterior margin deeply sinuate, its angles projecting; upper surface uneven, with a deep central furrow bounded on each side by a shiny black carina, and two shallower interrupted furrows on either side. *Elytra* acuminate behind, separately rounded at the base, shortly and divergently mucronate at the apex, with broad sulci containing large, closely set, subreticulate foveæ, the intervals narrow and undulating, the

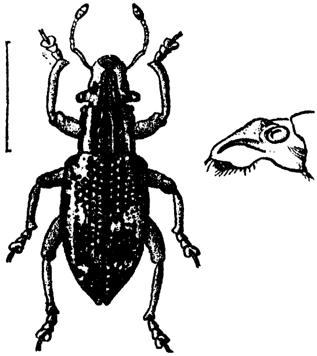

Fig. 42.—*Dyscheres rugosus*, Pasc.

alternate ones being slightly more raised, the foveæ scarcely diminishing behind.

Length, 10–10¾ mm.; breadth, 4½–5 mm.

BURMA: Tharrawaddy (*G. Q. Corbett*). CAMBODIA. MALACCA.

Type in the British Museum.

Genus POLYCLEIS.

Polyclæis, Schönherr, Gen. Curc. vi, pt. 1, 1840, p. 215; Lacordaire, Gen. Col. vi, 1863, p. 98.

TYPE, *P. equestris*, Boh. (Africa).

Head with the eyes large, lateral and more or less convex. *Rostrum* continuous with and longer than the head, the base broader than the forehead, the apex with a small triangular emargination; the scrobes lateral, deep and curving downwards in front of the eye; the mandibles with a conspicuous and slightly projecting scar; the mentum subtrapezoidal, large and filling its cavity, the submentum without a peduncle. *Antennæ* with the scape curved, clavate, just reaching or exceeding the front margin of the eye; the funicle variable, joint 2 always longer than the others, but 1 often not longer than 3, 3–6 usually subequal, 7 generally rather longer and wider, the club 4-jointed, ovate and sharply acuminate. *Prothorax* variable in shape, the apex vertically truncate and furnished with vibrissæ, the base more or less bisinuate, the gular margin sinuate. *Scutellum* large and triangular. *Elytra* subtruncate at the base, more or less exceeding the prothorax in width, the shoulders roundly rectangular or sloping, with 10 striæ, which are sometimes indistinct or irregular, the posterior declivity sloping gradually, the lateral margin scarcely sinuate. *Sternum* with the front coxæ nearer the anterior edge of the prosternum; the mesosternum with the epimera as large as the episterna; metasternum much longer than the median coxæ, the episterna broad at the base and narrowing behind, the hind coxæ reaching the elytra. *Venter* with the intercoxal process rounded and narrower than the coxæ, segment 2 equal to or longer than 3 or 4, separated from 1 by an almost straight incision in the ♂ and by a more curved one in the ♀. *Legs* with the front pair rather longer than the others, the femora clavate, the tibiæ rather compressed, the anterior pairs curved and finely serrate internally, the hind pair with the corbels open and extended for a long distance up the dorsal edge, the tarsi broad, the claws connate.

Range. Africa, Madagascar, Bengal.

90. Polycleis parcus, *Boh.*

Polycleis parcus, Boheman,* Schönh. Gen. Curc. vi, pt. 1, 1840, p. 220.

Colour black, with rather thin grey scaling.

Head closely and coarsely punctate, somewhat wrinkled; the eyes large, broadly ovate, and not very convex. *Rostrum* longer than the head, slightly dilated at the apex, coarsely punctate and wrinkled, and with a deep central furrow which ascends the forehead. *Antennæ* piceous, the scape curving forwards when erect, the second joint of the funicle very slightly longer than the first (remainder of antennæ missing). *Prothorax* broader than long, broadest at the base and roundly narrowed to the apex, the base shallowly bisinuate and narrowly marginate, the posterior angles rounded and not projecting laterally, the upper surface with shallow confluent punctation, mostly hidden by the scaling, and with a faint central furrow near the base only. *Elytra* broad, with the shoulders roundly rectangular, the sides subparallel to beyond the middle, the apices forming a short sharp mucro, the punctures in the striæ large and deep at the base and diminishing behind, the intervals finely and closely punctate beneath the scaling and without appreciable setæ, the scales small and circular. *Legs* piceous, with dense whitish scaling.

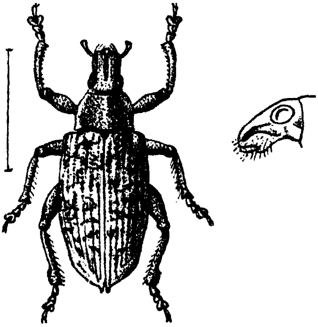

Fig. 43.—*Polycleis parcus*, Boh.

Length 11–12 mm.; breadth, 5–5½ mm.

BENGAL.

Type in the Stockholm Museum.

In addition to the type I have seen only a single specimen, in the Paris Museum; both of these must have been taken some 70 years ago. As the rest of the genus is purely Ethiopian it is possible that there may be an error in the locality of these two examples, which came from the same source.

Genus **ASTYCUS**.

Astycus, Schönherr, Disp. Meth. 1826, p. 129; Lacordaire, Gen. Col. vi, 1863, p. 94.

Lepropus, Schönherr, op. cit. p. 154.—Type, *Curculio lateralis*, F.

Brachyaspistes, Schönherr, Gen. Curc. vi, pt. 1, 1840, p. 249; Lacordaire, op. cit. p. 95.—Type, *B. femoralis*, Fåhr. (n. syn.).

Lepidastycus, Faust, Ann. Mus. Civ. Genova, xxxiv, 1894, p. 175 (1895).—Type, *L. doriæ*, Fst. (n. syn.).

Astycophobus, Faust, Deut. Ent. Zeit. 1897, p. 348.—Type, *Astycus griseus*, Desbr. (n. syn.).

Astycophilus, Faust, l. c.—Type, *Curculio chrysochlorus*, Wied. (n. syn.).

TYPE, *Curculio chrysochlorus*, Wied.

Head with the eyes lateral, and variable in size and prominence. *Rostrum* deflected, longer than the head, the base only slightly broader than the forehead, the upper surface plane, with a deep central furrow and with its margins angulated, the apex more or less deeply emarginate; the scrobes linear or somewhat dilated behind, almost entirely lateral, curving sharply downwards at some distance from the eye, or else more or less approaching its lower margin; mandibles with a very conspicuous projecting scar; mentum trapeziform, the emargination of the submentum truncate and without a peduncle. *Antennæ* inserted before the middle of the rostrum, the scape reaching about the middle of the eye when in a position of rest, cylindrical, curving slightly forwards when erect and gradually clavate; the funicle with the two basal joints longer, 4–6 subequal and bead-like, 3 and 7 longer, the latter subconical, the club ovate and distinctly 4-jointed. *Prothorax* truncate at the apex, the base truncate or bisinuate, the sides rounded, the basal margin narrowly elevated, the apical margin with conspicuous vibrissæ, the gular margin distinctly sinuate. *Scutellum* present, variable in shape. *Elytra* with the basal margin elevated and sinuate, with a distinct humeral callus constituting a true shoulder, the lateral margin shallowly sinuate above the hind coxæ and excised near the base to receive the head of the episternum of the metasternum. *Sternum* with the front coxæ sometimes separated, and always much nearer the anterior margin of the prosternum; the mesosternum with the epimera usually nearly as large as the episterna and separating them from the base of the elytra; the metasternum varying in length from slightly to much longer than the median coxæ (except in *A. immunis*, Wlk., in which it is shorter), the episterna broad and conspicuous, the posterior coxæ not reaching the elytra. *Venter* with the intercoxal process rounded and much narrower than the hind coxæ, segment 2 longer than 3 and 4 and separated from 1 by a more or less curved suture. *Legs* with the front pair rather longer and distinctly stouter than the others, the femora spindle-shaped; the front tibiæ curved, denticulate internally and mucronate at the apex, the hind pair with the corbels enclosed, bare and not, or only shortly, ascending the dorsal edge, which sometimes bears a longitudinal furrow; the tarsi with joint 3 broadly lobate, the claws connate only at the extreme base.

Range. Ceylon, India, Burma, China, Siam and Sumatra.

Dr. Heller has already suggested (Stett. Ent. Zeit. 1908, p. 125) the possibility that Faust had gone too far in his attempts to split up the genus *Astycus*; for the latter has recognised as valid genera every one of the names which are here treated as synonyms. The examination of a considerable amount of additional material (for there are here enumerated 16 species which were unknown to Faust) shows that the characters upon which he relied for his genera are all liable to such serious exceptions that they must be treated merely as specific, and not generic distinctions. The principal characters that he utilised were the curvature of the scrobe, the tibial furrows, the relative length of the metasternum, the proportions of the two basal joints of the funicle, and the shape of the elytra.

Schönherr actually cited as the type of *Astycus*, *Curculio adultus*, Oliv., a species which he had only doubtfully identified; but the insect he had before him is unquestionably conspecific with *A. chrysochlorus*, Wied.

Key to the Species.

1 (18) Tibiæ with a longitudinal furrow on the upper surface, especially in the anterior pairs.

2 (17) Front coxæ contiguous or subcontiguous; metasternum and abdomen finely granulate.

3 (8) Intervals on elytra smooth and without conspicuous granules on the disk.

4 (7) Basal margin of elytra deeply and continuously sinuate; posterior angles of prothorax only slightly prominent.

5 (6) Elytra with uniform pale metallic green, blue-green or grey scaling; joint 2 of funicle not, or very slightly, longer than 1 .... *chrysochlorus*, Wied., p. 133.

6 (5) Elytra with metallic green scaling and each with a broad discal and lateral yellow stripe, the stripes uniting at the base and apex; joint 2 of funicle evidently longer than 1 .... *flavovittatus*, Pasc., p. 134.

7 (4) Basal margin of elytra shallowly sinuate in the middle only, subtruncate laterally; posterior angles of prothorax very prominent; colour uniform metallic green .... *adamsoni*, sp. n., p. 135.

8 (3) Intervals on elytra rugose or granulate.

9 (16) Striæ on the elytra not punctate, but with rows of granules; the two basal joints of the funicle equal.

10 (11) Forehead and base of rostrum

broadly impressed; posterior tibiæ of ♂ not denticulate; anal segment of ♀ not compressed, hardly different from that of ♂; body with grey scaling ...... *neglectus*, sp. n., p. 135.

11 (10) Forehead and rostrum not impressed; posterior tibiæ of ♂ strongly denticulate; anal segment of ♀ more or less compressed at apex.

12 (15) Elytra black, the margins with dense scaling; prothorax coarsely granulate; sternum and sides of abdomen with metallic green or coppery scaling.

13 (14) Femora red-brown; prothorax with a shallow central furrow in the basal half, with the sides less rounded and the granules less close; the elytra longer and narrower (9 : 5) .... *doriæ*, Fst., p. 136.

14 (13) Femora black; prothorax without a central furrow, the sides more rounded and the granulation closer; the elytra proportionately shorter (8¼ : 5).......... *sylhetensis*, sp. n., p. 137.

15 (12) Elytra dark red-brown, the extreme margins bare of scaling; prothorax very finely granulate; sternum and abdomen with plain grey scaling .... *submarginalis*, Fst., p. 138.

16 (9) Striæ on elytra punctate; joint 2 of funicle much longer than 1.. *lateralis*, F., p. 139.

17 (2) Front coxæ widely separated; metasternum and abdomen not granulate .... *gestroi*, sp. n., p. 138.

18 (1) Tibiæ not furrowed dorsally.

19 (24) Second joint of funicle longer than the first.

20 (21) Front coxæ widely separated; elytra and metasternum not granulate; rostrum not carinate dorsally .... *gestroi*, sp. n., p. 138.

21 (20) Front coxæ contiguous; elytra and metasternum granulate.

22 (23) Intervals on elytra not costate, the striæ deeply punctate; rostrum with a fine dorsal carina on each side of the central furrow .... *lateralis*, F., p. 139.

23 (22) Intervals on elytra not costate, the striæ finely granulate; rostrum without dorsal carina .... *oculatus*, Hel., p. 140.

24 (19) Second joint of funicle not longer than first.

25 (30) Carinæ on rostrum converging behind.

26 (27) Front tibiæ with two internal spines at the apex .... *armatipes*, sp. n., p. 141.

27 (26) Front tibiæ with only a single apical spine.

28 (29) Each elytron with two broad lateral green stripes enclosing a narrower black stripe .... *aurovittatus*, Hel., p. 142.

29 (28) Each elytron with only a single broad lateral green stripe...... *limbatus*, sp. n., p. 142.

30 (25) Carinæ on rostrum not converging behind.

31 (34) Head without a central furrow, but with a lateral furrow above each eye.

32 (33) Rostrum with a distinct central furrow; the anterior part of the forehead and base of the rostrum with fine shallow punctation; elytra with no paler lateral stripe .... *griseus*, Desbr., p. 144.

33 (32) Rostrum without a central furrow, but with only a basal fovea; anterior part of forehead and base of rostrum very shiny and almost impunctate; elytra with a paler lateral stripe .... *glabrifrons*, sp. n., p. 145.

34 (31) Head with a continuous central furrow or stria ascending to the vertex.

35 (46) Funicle with the two basal joints equal.

36 (37) Apical area of elytra with numerous, rather long, erect setæ; femora red, the knees and tibiæ blackish; scaling green, the margins of the thorax and elytra more or less suffused with orange *femoralis*, Fhs., p. 145.

37 (36) Apical area of elytra with much fewer, very short, more or less recumbent setæ; femora blackish, never paler than the tibiæ.

38 (41) Rostrum with two lateral carinæ enclosing a longitudinal impression, and an ante-ocular impression below them.

39 (40) Apices of elytra each with a small divergent projection, interval 3 not broader than 4; a small patch of larger whitish overlapping scales just behind the scutellum .... *apicatus*, sp. n., p. 146.

40 (39) Apices of elytra not produced, interval 3 broader than 4; no patch of larger overlapping scales behind the scutellum.... *cinereus*, sp. n., p. 147.

41 (38) Rostrum without the lower lateral carina or the ante-ocular impression.

42 (43) Forehead with a deep dorsal stria on each side of the central furrow; scaling green .... *æqualis*, Walk., p. 147.
43 (42) Forehead without dorsal striæ; scaling not green.
44 (45) Rostrum rather narrower at the base than at the genæ; scales on prothorax much smaller and more sparse than those on elytra; setæ on elytra much smaller than the scales; outer apical angle of hind tibiæ a sharp right angle. *lewisi*, sp. n., p. 149.
45 (44) Rostrum broader at base than at genæ; scales on prothorax as large and almost as dense as those on elytra; setæ on elytra as large as the scales; outer apical angle of hind tibiæ a broadly rounded obtuse angle.. *cinnamomeus*, sp. n., p. 148.
46 (35) Funicle with joint 1 longer than 2.
47 (50) Front coxæ distinctly separated.
48 (49) Antennæ dark piceous; scales on prothorax smaller and more sparse than those on elytra; elytra with interval 3 not broader than 4 .... *immunis*, Walk., p. 150.
49 (48) Antennæ yellowish red; scales on prothorax as large and as dense as those on elytra; elytra with interval 3 broader than 4 .... *canus*, sp. n., p. 151.
50 (47) Front coxæ contiguous .... *horni*, sp. n., p. 152.

91. Astycus chrysochlorus, *Wied.*

Curculio chrysochlorus, Wiedemann,* Zool. Mag. ii, 1, 1823, p. 122.
Astycus variabilis, Gyllenhal,* Schönh. Gen. Curc. ii, 1834, p. 91.
Astycus adultus, Faust* (? Olivier), Ann. Mus. Civ. Genova, xxxiv, 1894, p. 173 (1895).

Colour black, with uniform brilliant metallic pale green scaling above, the head, rostrum and legs with a coppery reflexion, the lower surface grey; occasionally the entire scaling is uniform grey.

Head finely and closely punctate beneath the scaling, the forehead almost plane; eyes large, oval and not prominent. *Rostrum* longer than broad, slightly dilated near the apex, almost plane above, with a deep central furrow (ascending the forehead to the middle of the eyes), a shallow longitudinal impression on each side and a sharp marginal carina, the sides almost vertical. *Antennæ* blackish, with grey pubescence, the funicle with joint 2 not or scarcely longer than 1, 3 longer than 4. *Prothorax* a little broader than long, the sides strongly rounded in ♂, broadest rather behind the middle, less rounded in ♀, the apex much narrower than the base, the basal margin faintly sinuate towards the sides, the upper surface closely granulate and without any central furrow, the extreme apices of the granules bare. *Scutellum* triangular. *Elytra* jointly sinuate at the base, gradually narrowing behind from the shoulders, the apices separately pointed, the punctures in the striæ diminishing behind, the intervals broader than the striæ, smooth, almost plane and with very short depressed white setæ. *Legs* piceous, with dense scaling; the tibiæ with shallow dorsal furrows, the hind pair with the internal apical angle produced and the corbels almost transverse to the long axis, their apex produced dorsally into a sharp acute angle; the front coxæ contiguous.

Anal segment of the ♀ rounded at the apex and with the margin slightly raised, with a short basal stria on each side in both sexes.

Length, 12½-18½ mm.; breadth, 5¼-7½ mm.

MADRAS: Berhampur (*E. T. Atkinson*). BENGAL: Konbir, Chota Nagpur (*Cardon*); Dacca; Sahibganj (Ind. Mus.); Pusa, Bihar (*T. B. Fletcher*). SIKKIM: Mungphu (*E. T. Atkinson*). ASSAM: Tejput (*Desenne*—Pusa Coll.). BURMA: Shwegu (*Fea*).

Type in the Copenhagen University Museum; of *variabilis* at Stockholm.

Schönherr (*l. c.*) suggested that *Curculio adultus*, Oliv., might be the grey form of this species; while Faust has assigned that name to specimens which he separates specifically from *A. chrysochlorus*. Through the kindness of Dr. Heller I have been able to examine two of these specimens, and I cannot regard them as specifically separable from Wiedemann's species. Unfortunately M. P. Lesne informs me that he cannot recognise Olivier's type with certainty in the Paris Museum Collection, from which it was described. But seeing that Olivier definitely gives Surinam as the locality of his insect, there may yet be found a South American species which can be referred to it. If the name is to be used for an Indian insect, Olivier's crude figure agrees best with the species here described as *A. neglectus*, sp. nov.

92. **Astycus flavovittatus**, *Pasc.*

Astycus flavovittatus, Pascoe,* Cist. Ent. ii, 1880, p. 588.
Astycus quadrivirgatus, Desbrochers des Loges, C. R. Ent. Soc. Belg. 1891, p. cccliv.

Colour black, with dense metallic green scaling, each elytron having two broad golden yellow stripes, one on interval 2 and half of 3, the other partly on intervals 7 and 8; these stripes unite broadly near the apex and almost meet at the base.

The only constant external structural characters by which this species can be distinguished from *A. chrysochlorus*, Wied., are that the rostrum is slightly convex dorsally, the lateral margin being less sharply defined and the sides less steep; the second joint of the funicle is distinctly longer than the first; the elytra are proportionately much narrower, the basal margin being more deeply sinuate and more strongly reflexed. The genitalia of the ♂, however, afford a satisfactory specific distinction. In *chrysochlorus* the male organ has a distinct median dorsal carina; from a lateral aspect the outline forms a regular curve both above and below, being deepest at about one-fourth from the apex. In *flavovittatus* there is no dorsal carina; the dorsal outline is sinuate at about one-fourth from the apex, the ventral outline being sinuate quite close to the apex; the depth is uniform from near the base to beyond the middle, diminishing thence to the apex.

Length, 12½–15½ mm.; breadth, 5–6½ mm.

UNITED PROVINCES: Allahabad. SIKKIM: Kurseong (*Cardon*). ASSAM: Sylhet; Halem (*Mitchell*—Pusa Coll.); Deju and Silonibari, N. Lakhimpur (*H. Stevens*).

Type in the British Museum; type of *quadrivirgatus* lost.

93. **Astycus adamsoni**, sp. nov.

Colour black, with uniform metallic green scaling above, more or less suffused with orange powdering along the sides and base of the prothorax and elytra.

Agrees with *A. chrysochlorus*, Wied., except in the following points:—*Head* with the eyes more prominent, the central stria ascending the forehead as far as the posterior edge of the eyes. *Rostrum* more or less convex dorsally, the lateral edges not so sharply defined, and the sides forming a curved slope; the setæ distinctly shorter and thinner. *Antennæ* with joint 2 of the funicle distinctly longer than 1. *Prothorax* with a faint central stria, the basal constriction a good deal deeper and the posterior angles more prominent. *Venter* with the anal segment without basal striæ.

Length, 10–11½ mm.; breadth, 6–6¼ mm.

BURMA: Papun, Tenasserim (*Col. Adamson*—type). BENGAL: Cuttack.

Types ♂ ♀ in the British Museum.

94. **Astycus neglectus**, sp. nov.

Colour black, with uniform dense grey scaling.

Head with the forehead flattened and depressed, with fine shallow punctation and a narrow central furrow in the anterior part only; eyes large, oval, subdepressed, the upper edge rather higher than the level of the forehead. *Rostrum* twice as long as broad, slightly dilated towards the apex, the apical margin with a broad shallow emargination, the upper surface flattened and shallowly depressed, with a deep central furrow and a marginal carina, the ante-ocular area plicate. *Antennæ* black, the funicle with the two basal joints subequal, 3 a little longer than 4, 7 elongate and subconical, the club very narrow and elongate. *Prothorax* a little broader than long, in the ♂ the sides are rounded, broadest a little behind the middle and constricted near both the base and the apex, in the ♀ the sides are subparallel from the base to the middle, then narrowed in a curve to the apex; the basal margin truncate, the upper surface closely covered with small distinct granules, without any central furrow, but with a shallow rounded impression on each side about the middle. *Scutellum* triangular. *Elytra* parallel-sided from the shoulders to about the middle and subacuminate behind, the apices not mucronate nor divergent, with deep striæ containing rows of small granules, the intervals much broader than the striæ, convex and covered with numerous irregular small black granules, stria 9 with a rounded impression on a level with the posterior coxæ, interval 5 usually abraded in the basal half and with a row of irregular shallow impressions; the setæ very short and depressed. *Legs* black, with pale setæ, the tibiæ with a deep dorsal furrow, the posterior pair slightly produced internally at the apex and with the corbels not ascending the dorsal edge.

Anal segment of the ♀ almost plane and simply rounded at the apex; the anterior coxæ contiguous.

Length, ♂ 12–15, ♀ 14½–19½ mm.; breadth, ♂ 4½–6, ♀ 5¾–8¼ mm.

BENGAL: Dacca; Kaliganj (*Atkinson*—Ind. Mus.). MALAY STATES: Penang.

Types ♂ ♀ in the British Museum.

95. **Astycus doriæ**, *Fst.*

Lepidastycus doriæ, Faust,* 'Ann. Mus. Civ. Genova, xxxiv, 1894, p. 175 (1895).
L. doriæ var. *cuprescens*, Faust,* l. c.

Colour black, with uniform metallic blue-green scaling; or with yellowish-grey scaling with a coppery reflexion, leaving a broad denuded median stripe on the prothorax (var. *cuprescens*); the granules always bare.

Head with fine shallow punctation, the forehead plane, striolate and with a deep central furrow ascending to the vertex; eyes broadly ovate and moderately prominent. *Rostrum* slightly longer than broad, somewhat dilated at the apex, the apical border shallowly emarginate, the upper surface plane and striolate, with a broad deep central furrow and a submarginal carina, the anteocular impression shallow and plicate. *Antennæ* black, the funicle with the two basal joints equal, 3 scarcely longer than 4, 7 about as long as broad, the club narrowly elongate. *Prothorax* about as long as broad, its sides rounded, broadest behind middle, the apex narrower than the base, the basal margin subtruncate, the upper surface closely covered with small bare granules and with a faint central furrow which is more distinct at the base. *Scutellum* longer than broad. *Elytra* parallel-sided in the basal half, but slightly broader behind the middle than at the shoulders, broadly rounded posteriorly, with shallow striæ containing rows of small granules, the intervals broad, rather convex and closely covered with irregular black granules, which are much denser and rather smaller than those on the prothorax; the setæ very short and depressed on the disk, longer and suberect on the declivity and forming a short fringe along the apical margin. *Legs* dark red-brown with pale setæ, the tibiæ darker, the tarsi black, the tibiæ with a dorsal furrow, the posterior pair produced internally at the apex and with the corbels slightly ascending the dorsal edge.

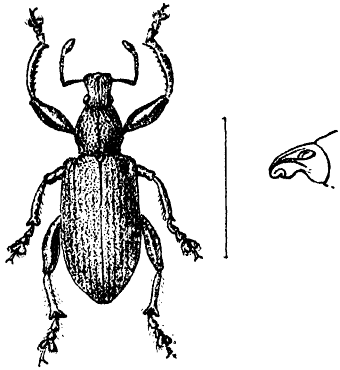

Fig. 44.—*Astycus doriæ*, Fst.

Anal segment of the ♀ contorted, strongly compressed at the apex and bent downwards; anterior coxæ contiguous.

Length, ♂ 12½, ♀ 14½–15½ mm.; ♂ 5, ♀ 6¼–6¾ mm.

Burma: Karen Hills, 3000–3700 ft. (*Fea*).

Types ♂ ♀ in the Genoa Museum.

96. **Astycus sylhetensis**, sp. nov.

Colour black, with rather thin metallic green scaling (♂) or with grey scaling, sometimes having a metallic reflexion (♀), the granules on the prothorax and elytra black and bare.

Closely allied to *A. doriæ*, Fst., but the upper part of the forehead is granulate; the prothorax has the sides more strongly rounded, the granules being of the same size but more closely placed, and there is no trace of a central furrow; the elytra are evidently shorter in proportion to their breadth and more broadly rounded posteriorly than in *doriæ*; the femora are black and much more densely clothed with scaling; the green scaling is less metallic and lacks the blue tinge of *doriæ*. The anal segment of the ♀ is only slightly compressed at the apex, being similar to that of *A. lateralis*, F., but much shorter.

Length, ♂ 12–15, ♀ 12–15 mm.; breadth, ♂ 4½–6, ♀ 4¾–6½ mm.

Assam: Chandkhira, Sylhet (*J. L. Sherwill*).

Types ♂ ♀ in the British Museum.

97. **Astycus submarginalis**, *Fst.*

Lepidastycus submarginalis, Faust,* Ann. Mus. Civ. Genova, xxxiv, 1894, p. 176 (1895).

This species is very closely allied to *L. doriæ*, Fst., and differs from it only in the following particulars:—*Rostrum* proportionately a little broader, the central furrow slightly broader and deeper. *Prothorax* with the sides more rounded, the granules much finer, the scaling denser laterally. *Elytra* with finer and more dense granulation, similar to that on the prothorax, the marginal interval without granules or scaling; the scales somewhat larger than in *A. doriæ*, the setæ stouter and more numerous. *Legs* with the femora much darker, scarcely lighter than the tibiæ.

Length, ♂ 12¼, ♀ 16½ mm.; breadth, ♂ 4¾, ♀ 7½ mm.

BURMA: Karen Hills, 4300–4700 ft. (*Fea*).

Types ♂ ♀ in the Genoa Museum.

98. **Astycus gestroi**, sp. nov.

Colour black, with pale green scaling, more or less suffused with orange at the sides of the prothorax and at the base and sides of the elytra.

Head convex, with very fine shallow punctation and a narrow central furrow on the anterior part of the forehead only; eyes oval and slightly prominent. *Rostrum* very slightly broader than long, parallel-sided, deeply emarginate at the apex, slightly impressed above, with a narrow central furrow and with an elongate impression in front of the eye. *Antennæ* piceous, with pale pubescence, the funicle with joint 2 longer than 1, 3 longer than 4, 7 elongate and conical, the club narrowly elongate. *Prothorax* a little broader than long, its sides rounded, broadest behind middle, the basal margin truncate, the upper surface with shallow rugosities

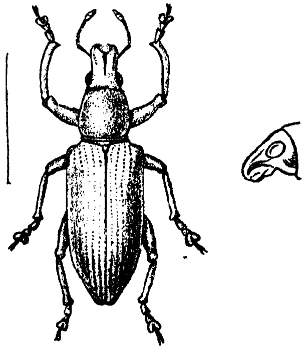

Fig. 45.—*Astycus gestroi*, Mshl.

which are quite concealed by the scaling and without any central furrow. *Scutellum* elongate. *Elytra* with the shoulders roundly subrectangular, the sides parallel from there to beyond middle and acuminate posteriorly, the apices pointed and divergent, the striæ shallow and with distinct separated punctures, the intervals smooth, much broader than the striæ and almost plane, the setæ extremely short and depressed. *Legs* with dense green scaling, the tibiæ with very shallow furrows on the dorsal edges, the corbels of the posterior pair not ascending the tibia; the front coxæ widely separated.

Anal segment of the ♀ rather elongate, rounded at the apex, somewhat concave and with a faint central carina.

Length, 14½ mm.; breadth, 5¼ mm.

BURMA: Houngdarau Valley, Tenasserim (*Fea*).

Type ♀ in the Genoa Museum.

99. **Astycus lateralis**, *F.*

Curculio lateralis, Fabricius,* Ent. Syst. i, 2, 1792, p. 454.
Lepropus lateralis, Schönherr, Disp. Meth. 1826, p. 155.
Curculio rutilans, Olivier, Ent. v, 83, 1807, p. 333, pl. 25, f. 367.
Astycus lateralis var. *subacuminatus*, Faust, Ann. Soc. Ent. France, 1892, p. 505 (1893).

Colour black, with pale green scaling, which is sparse dorsally but much denser along the sides of the head, thorax and elytra; in the var. *rutilans* the scaling is greyish with a more or less pronounced coppery reflexion.

Head coriaceous, the forehead plane, rugosely wrinkled and with the central furrow not ascending the vertex; eyes oval and slightly prominent. *Rostrum* longer than broad, parallel-sided, the upperside plane and rugose, with a fine dorsal and marginal carina on each side of the central furrow which converge towards the apex, the ante-ocular area shallowly impressed and wrinkled. *Antennæ* black, the funicle with joint 2 much longer than 1, 3 longer than 4, and 7 about as long as broad. *Prothorax* as long as broad or a little broader than long, its sides rounded, broadest rather behind the middle, the apex narrower than the base, the latter truncate, the upper surface closely covered with low granules and without any central furrow. *Scutellum* almost circular. *Elytra* rather narrow at the shoulders, the sides slightly rounded, broadest behind the middle, rounded posteriorly, the apices not mucronate, deeply punctato-striate, the punctures vanishing behind the middle, the intervals broad, convex and rugose or sparsely granulate, the setæ very short and subdepressed. *Legs* black, with sparse green scaling; the tibiæ with shallow dorsal sulci, which are sometimes hidden by the scaling, the posterior pair with the inner apical angle strongly produced and with the corbels slightly ascending the dorsal edge; the anterior coxæ contiguous.

Anal segment of the ♀ with two deep basal impressions and slightly compressed at the apex.

Length, ♂ 7–10½, ♀ 7½–12¾ mm.; breadth, ♂ 2½–4, ♀ 3¾–5½ mm.

Widely distributed in India, Burma, Siam, and the Malay Peninsula.

Type in the Copenhagen University Museum; type of *rutilans* at Paris.

This species has been observed to attack tea plants in Assam and also to defoliate mulberry bushes in Rangoon (Ind. Mus. Notes, iv, 1899, p. 184).

100. **Astycus oculatus**, *Heller*.

Astycophilus oculatus, Heller,* Stett. Ent. Zeit. 1908, p. 126.

Colour black, the elytra and sides of the prothorax with thin green scaling and more or less covered with a bright yellow powdering, the elytra with a bare lateral patch behind the middle.

Head granulato-punctate, forehead striolate, with a deep central furrow ascending the vertex; eyes broadly oval, prominent. *Rostrum* a little longer than broad, slightly broader towards the apex, plane above, with a broad central furrow and on each side two fine lateral carinæ enclosing a longitudinal impression. *Antennæ* black, the funicle with joint 2 evidently longer than 1, 3 and 4 equal, 7 transverse. *Prothorax* a little longer than broad, its sides strongly rounded, almost globular in some examples of the ♂, broadest about the middle, constricted at both base and apex, the latter narrower than the former, finely and closely granulate, usually with a faint and much abbreviated central stria. *Scutellum* almost circular. *Elytra* parallel-sided from the shoulders to beyond the middle, rounded behind, the apices scarcely mucronate, deeply sulcate, the sulci containing rows of small granules which sometimes appear like little transverse carinæ, the intervals rather narrow, costate and granulate; the setæ short and subdepressed, not forming an apical fringe. *Legs* black, with short pale setæ; the tibiæ not sulcate, the posterior pair produced internally at the apex and with the corbels slightly ascending the dorsal edge; the front coxæ contiguous.

Anal segment of the ♀ broadly impressed on each side and simply rounded.

Length, ♂ 7–12¼, ♀ 6¼–11¾ mm.; breadth, ♂ 2¾–4¼, ♀ 2½–5 mm.

MADRAS: Ouchterlony Valley, 3000–3500 ft., Nilgiris (*H. L. Andrewes*); Kanara (*T. R. D. Bell*); Malabar; Sidapur, 3500 ft., Coorg.

Types ♂ ♀ in the Dresden Museum.

In addition to its great variability in the matter of size, this species varies in the shape of the prothorax of the ♂. In the smallest specimens the prothorax entirely resembles that of the ♀, but in the larger examples its sides are much more rounded, and it becomes almost globular in shape, thus giving the insect a very different appearance.

A. oculatus var. **levicollis**, nov.

This local form differs from the type in the structure of the prothorax. In the ♂ this segment entirely lacks the dorsal granules, being smooth and shiny, with scattered shallow punctures. This character is not so well marked in the two ♀ specimens, as the granules are present in the middle of the basal half, but the anterior and lateral areas are as smooth as in the ♂. The ♂ genitalia quite resemble those of the typical form.

MADRAS: Pirmaad, Travancore (*Mrs. R. S. Imray*).

Types ♂ ♀ in the British Museum.

101. **Astycus armatipes**, sp. nov.

Colour black, bare, variegated with green scaling as follows: a few scales at the apex of the rostrum and round the eyes; the prothorax with sparse scaling on the disk becoming denser laterally; the elytra with a large humeral patch at the base of intervals 3–6, and a smaller one behind middle on 4 and 5, a few small spots on the declivity and some more or less confluent green patches along the sides.

Head almost plane, plicate and with a fine central furrow ascending to the vertex; eyes broadly oval, very prominent. *Rostrum* longer than broad, its sides slightly sinuate in the middle, the apex shallowly emarginate, the upper surface broadly impressed, with a deep central furrow, a sharp sublateral carina and finer one below it running obliquely from the antenna to the eye. *Antennæ* black, the funicle with joint 2 very slightly longer than 1, 3 and 4 subequal, and 7 as long as broad. *Prothorax* as long as broad, the sides rather strongly rounded, broadest a little behind middle, the basal margin scarcely bisinuate and much broader than the apex, the upper surface closely granulate throughout and with a very fine central furrow extending from the base to near the apex. *Scutellum* small, almost circular. *Elytra* with

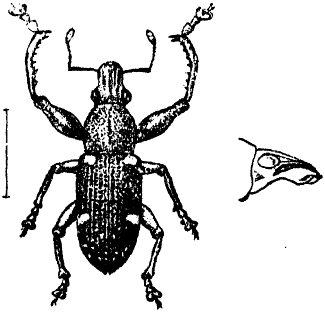

Fig. 46.—*Astycus armatipes*, Mshl.

the sides subparallel from the shoulders to beyond the middle, scarcely acuminate behind, the apices with a very short divergent mucro, with deep striæ containing large punctures which vanish posteriorly, the intervals scarcely broader than the striæ, convex and rugosely granulate; the setæ extremely short and subdepressed. *Legs* black, the inner edges of the posterior pairs of tibiæ, the bases of the anterior femora and the apices of the posterior pairs with green scaling; the tibiæ not sulcate, the apex of the hind pair slightly produced internally, and the corbels not ascending the dorsal edge; the front tibiæ with two large apical hooks and two rows of denticles along the inner edge; the anterior coxæ contiguous.

♀ unknown.

Length, 9¼ mm.; breadth, 3½ mm.

CEYLON (*Thwaites*).

Type ♂ in the British Museum.

102. **Astycus aurovittatus**, *Heller*.

Astycophobus aurovittatus, Heller,* Stett. Ent. Zeit. 1908, p. 125.

Colour black, with blackish scaling and with the following green or golden-green markings: a broad lateral stripe on the head and prothorax, a narrow central line on the latter, which continues right along the suture of the elytra to its apex, on each elytron a broad stripe running from the base of intervals 3–5 (or only 4 and 5) to the apex of 2–4 and uniting at base and apex with an equally broad lateral stripe, which, however, does not reach the extreme margin; these two stripes enclose a narrow strip of the black ground colour of varying width, and running from the shoulder to the apex of interval 5 (almost obliterated in one example). The structural characters of this insect agree almost entirely with those of the next species, *limbatus*, Mshl., but the sides of the prothorax are less narrowed behind and therefore less strongly rounded, the apical fringe of the elytra is shorter, and the apex of the ♂ organ is of a different shape, being much longer and more tapering.

Length, 6½–10½ mm.; breadth 2½–4¾ mm.

MADRAS: Wynaad (*E. T. Atkinson*); Ouchterlony Valley, 2500–3500 ft., Nilgiris (*H. L. Andrewes*); South Mysore (*H. L. Andrewes*); Coorg (*L. Newcome*).

Types ♂ ♀ in the Dresden Museum.

103. **Astycus limbatus**, sp. nov.

Colour black, with black (or nearly dull grey) scaling and with the following green or golden green markings: along the whole lateral area of the prothorax (often more or less denuded); and a broad stripe on the elytra between striæ 4–7, which is continued to the apex but does not reach the base, extending laterally in the basal half as far as stria 9.

Head convex, punctured and wrinkled, with a fine central furrow ascending the vertex; eyes broadly oval and moderately prominent. *Rostrum* as long as broad, parallel-sided in the ♂, sinuate laterally in the ♀; the upper surface sparsely punctate, slightly wrinkled, shallowly impressed, with a deep central furrow in the basal half only and with two lateral carinæ on each side which unite together at the apex, the ante-ocular space rather convex and wrinkled. *Antennæ* black, the funicle with joint 1 a little longer than 2, 3 slightly longer than 4, 7 conical and about as long as broad. *Prothorax* broader than long, its sides rounded, broadest behind the middle, shallowly constricted near the apex, which is narrower than the base, the basal margin subtruncate or faintly bisinuate, the upper surface evenly and rugosely granulate, with a narrow central furrow in the basal two-thirds. *Scutellum* transverse. *Elytra* parallel-sided from the shoulders to the middle and gradually narrowed behind, much broader in the ♀ than in the ♂, the apices divergent and pointed, deeply punctato-striate, the punctures diminishing behind, the intervals broad, smooth and convex; the setæ short and suberect on the disk, rather longer on the declivity and forming a long marginal fringe along the apical half of the elytra. *Legs* black, with long white hairs in the ♂, shorter in the ♀; the tibiæ not furrowed dorsally, the posterior pair not produced internally at the apex and with the corbels slightly ascending the dorsal edge; anterior coxæ contiguous, or very narrowly separated.

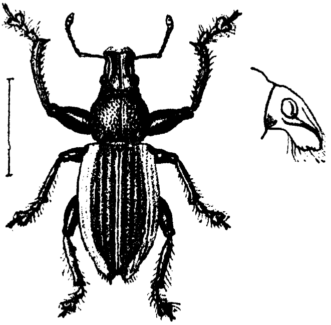

Fig. 47.—*Astycus limbatus* var. *hampsoni*, Mshl.

Anal segment of the ♀ concave and simply rounded at the apex.

Length, 11½–13½ mm.; breadth 4¾–6 mm.

Madras: Naduvatam, 7000 ft., Nilgiri Hills (*H. L. Andrewes*).

Types ♂ ♀ in the British Museum.

On the southern side of the Nilgiri Hills and down on the lower plateau there occurs a very well-marked local colour variation of this species.

A. limbatus var. **hampsoni**, nov.

This differs from typical specimens in having a narrow line of green scaling along the suture of the elytra, while the broad lateral stripe is continued right up to the base, its outward extension near the base being much narrower and often absent; on the prothorax the ♂ has no lateral green marking, and the ♀ has a broad lateral green stripe which is sharply defined on both edges, while in *limbatus* the whole side and undersurface is covered with green scales.

Leagth 6¾–10 mm.; breadth 2¾–4½ mm.

Types ♂ ♀ in the British Museum.

I can detect no difference in the male genitalia of these two forms.

104. **Astycus griseus**, *Desbr.*

Astycus griseus, Desbrochers des Loges,* C. R. Soc. Ent. Belg. 1891, p. cccliv.

Colour black, with rather thin grey or brownish scaling, often with a slight metallic reflexion; in the darker examples there is an ill-defined paler lateral stripe on the prothorax and elytra and a pale central stripe on the former.

Head with scattered coarse punctures and fine ones in between, the forehead convex, the central furrow of the rostrum ascending it for only a very short distance, and with a narrow longitudinal furrow above each eye; eyes oval, slightly prominent. *Rostrum* scarcely longer than broad, parallel-sided, plane and finely punctate above, with a narrow central furrow and on each side two lateral carinæ enclosing a broad and deep longitudinal impression. *Antennæ* red-brown, the funicle with joint 1 longer than 2, 3 and 4 subequal, 7 conical and about as long as broad. *Prothorax* a little broader than long, its sides rounded, broadest behind the middle, constricted near the base and the apex, the basal margin truncate, the upper surface closely and coarsely granulate, except along the apical margin, with a narrow central furrow reaching from the base almost to the apex. *Scutellum* transverse. *Elytra* rather narrow at the shoulders, the sides slightly rounded, a little broader behind the middle, especially in the ♀, punctato-striate, the punctures smaller but distinct behind, the intervals broad, smooth and slightly convex, the setæ short, broad and subdepressed, those at the sides not longer or more numerous and lying longitudinally. *Legs* black, with grey scaling; the tibiæ not sulcate, the posterior pair not produced internally at the apex and with the corbels slightly ascending the dorsal edge; the front coxæ contiguous.

Anal segment of the ♀ rather concave.

Length, 4½–6½ mm.; breadth, 1¾–4 mm.

BENGAL: Barwa, Chota Nagpur (*Cardon*). BOMBAY: Dharwar.

Type in the Brussels Museum.

105. **Astycus glabrifrons**, sp. nov.

Colour black, with dark greyish scaling, the elytra with a lateral stripe of pale green or greenish-white scales covering the base of intervals 9 and 10, the whole of 8 except the basal one-fourth, and the apex of 7; there are also a few green scales scattered on the disk.

Very closely allied structurally to *A. griseus*, Desbr., but differing as follows: the anterior part of the forehead and the base of the rostrum are more convex, much more shiny, and more finely punctate; the head has no central furrow, but there is usually a shallow fovea on the vertex and another on the anterior part of the forehead, which is sometimes continued just on to the base of the rostrum; the rostrum itself lacks the sharply defined central furrow of *A. griseus*, there being merely a shallow impression about the middle. Prothorax with the setæ on the disk short and fine, those at the sides much longer; whereas in *A. griseus* all the setæ are broadly spatulate, the lateral ones not being appreciably longer. Scutellum shorter and more transverse, the sides more deeply sinuate. Elytra with the setæ on the disk short, fine and inconspicuous, those in the pale lateral stripe longer, more raised, more numerous, and lying transversely with their apices inwards.

Length, $6\frac{1}{4}$–$7\frac{1}{2}$ mm.; breadth, 2–$2\frac{3}{4}$ mm.

MADRAS: Nilgiri Hills (*Sir G. F. Hampson*—type); Malabar. BOMBAY: Dharwar.

Type ♂ in the British Museum.

In two of the Dharwar specimens the second joint of the funicle is very short, being not or only slightly longer than the third; but no other differences are apparent.

106. **Astycus femoralis**, *Fhs.*

Brachyaspistes femoralis, Fåhræus,* Schönh. Gen. Curc. vi, pt. 1, 1840, p. 251.

Colour black, with dense pale green scaling, more or less suffused with orange at the base, sides and apex of the elytra, and also at the posterior angles and along the sides of the apical margin of the prothorax.

Head shiny and almost impunctate beneath the scaling, with a fine central furrow extending to the vertex; eyes very broadly oval, moderately prominent. *Rostrum* about as long as broad, parallel-sided, with a small angular emargination at apex, the upper surface shallowly impressed in the basal half, with a fine central furrow and the margins carinate, the ante-ocular impression indistinct. *Antennæ* black, the two basal joints of the funicle subequal, 3 longer than 4, 7 subconical and longer than broad. *Prothorax* as long as broad, its sides parallel from the base to the middle, then narrowing in a curve to the apex, the basal margin truncate or very shallowly bisinuate, the upper surface with large deep foveæ (more or less perceptible through the scaling) and with a fine central furrow extending from the base for four-fifths of the length. *Scutellum* transverse. *Elytra* rather short and broad, with the shoulders roundly subrectangular, broadest behind middle, not acuminate behind, the apices with a very small inconspicuous mucro (best seen from below), evidently punctato-striate, the punctures indistinct towards the apex, the intervals smooth, much broader than the striæ and almost plane; the setæ extremely short and depressed on the disk, a little longer and suberect on the declivity. *Legs* reddish brown, with the tibiæ and the apices of the femora darker; the tibiæ not sulcate, the posterior pair not produced internally at the apex and with the corbels ascending the dorsal edge; the anterior coxæ separated by the intercoxal processes.

Anal segment of the ♀ strongly transverse and rounded at the apex.

Length, ♀ 7½–8½ mm.; breadth 3¼–4 mm.

MADRAS: Pirmaad, Travancore (*G. S. Imray*); Trivandrum.

Type ♀ in the Upsala University Museum (Coll. Thunberg).

107. **Astycus apicatus**, sp. nov.

Colour black, with grey or light brown scaling, sometimes more or less interspersed with black scales; just behind the scutellum a small patch of larger and paler overlapping scales.

Head with a deep central furrow ascending the vertex, with large separated punctures and much smaller ones scattered in between. *Rostrum* about as long as broad, almost parallel-sided in the basal half, the genæ slightly dilated; the disk distinctly punctate, broadly and deeply impressed in the middle, with the usual abbreviated central furrow, on each side a subdorsal and lateral costa enclosing a longitudinal impression, and an anteocular impression below them; the scales not contiguous, the setæ spatulate and subrecumbent. *Antennæ* with the two basal joints of the funicle of equal length. *Prothorax* broader than long, the sides moderately rounded, broadest at the middle, the base slightly bisinuate; the upper surface coarsely punctate and wrinkled, the central furrow (sometimes irregular) not nearly reaching the apex, the scales of the same size as those on the elytra. *Scutellum* transverse, subtrapezoidal. *Elytra* with the shoulders prominent, roundly subrectangular, the sides parallel thence to beyond middle, the base jointly bisinuate, the apices each with a short divergent process; the striæ with large separated punctures which almost vanish on the apical third, the intervals slightly convex, 2 not broader than 3, the setæ very short and curved, inconspicuous on the disk. *Legs* piceous, with fairly dense pale scales; the hind corbels flat, the upper angle a blunt obtuse angle; the front coxæ separated.

Length, ♂ 6½–8, ♀ 7½–11 mm.; breadth, ♂ 2½–3½, ♀ 3½–4¾ mm.

CEYLON: Bogawantalawa, 5000 ft. (*E. E. Green*, *G. Lewis*); Dikoya, 3800–4200 ft. (*G. Lewis*); Maskeliya (*E. E. Green*); Trincomali (*C. F. S. Baker*).

Types ♂ ♀ in the British Museum.

Mr. Green notes that this species does serious damage to the leaves of young tea plants.

108. **Astycus cinereus**, sp. nov.

Very closely allied to *A. apicatus*, but rather larger and distinguished as follows:—*Rostrum* less deeply impressed on the disk. *Elytra* proportionately broader, slightly dilated behind middle (♀), the apices without any projection, interval 3 broader than 4, the shoulders a little less prominent, and no patch of pale overlapping scales behind the scutellum.

Length, ♂ 8–8¾, ♀ 9–10 mm.; breadth, ♂ 4, ♀ 4½–4¾ mm.

CEYLON.

Types ♂ ♀ in the British Museum.

109. **Astycus æqualis**, *Wlk.*

Piazomias æqualis, Walker,* Ann. Mag. Nat. Hist. (3) iii, 1859, p. 263.
Astycus ebeninus, Walker,* l. c.

Colour black, with dense dull green scaling, often with yellow powdering laterally; the elytra sometimes finely variegated with blackish scales; the prothorax paler laterally and with a coppery central line; the head and underparts sandy with a coppery reflexion, the centre of the body being green.

Head almost impunctate, the forehead plane, with a narrow central furrow ascending the vertex and on each side of it a short narrow stria; eyes oval, rather prominent. *Rostrum* scarcely as long as its width at the base, slightly narrowed in front, shallowly impressed above, with a narrow central furrow and on each side a juxta-marginal carina followed by a longitudinal impression. *Antennæ* red-brown, the funicle with joints 1 and 2 equal, 3 and 4 equal, 7 as long as broad. *Prothorax* as broad as long or somewhat transverse, the sides slightly rounded, the base evidently bisinuate, the apex a good deal narrower, the upper surface with large deep and close punctures and with a fine central furrow, abbreviated in front. *Scutellum* transverse. *Elytra* very shallowly sinuate at the base, parallel-sided from the shoulders to beyond the middle, the apices divergently pointed, punctato-striate, the punctures smaller but distinct behind, the intervals broad, smooth and slightly convex, the setæ short and subdepressed. *Legs* dark red-brown, with grey scaling; the tibiæ not sulcate, the posterior pair not produced internally at the apex and with the corbels slightly ascending; the anterior coxæ widely separated.

Anal segment of the ♀ simple.

Length, 6–7½ mm.; breadth, 2½–3¼ mm.

CEYLON: Dikoya, 3800–4200 ft., and Kitulgalla, 1700 ft. (*G. Lewis*).

Type ♀ in the British Museum; also the type of *ebeninus*.

A. ebeninus, Walk., was founded on an entirely abraded specimen.

110. Astycus cinnamomeus, sp. nov.

Black, the head and prothorax with not very dense, greyish brown scales, between many of which the tegument is visible; elytra with small, nearly always contiguous, opaque, cinnamon brown scales, which are of varying shapes, being ovate, triangular or irregularly quadrilateral; lower surface with fairly dense whitish scaling.

Head scarcely punctate, with a deep central furrow ascending to the vertex and on each side two longitudinal impressions near the eyes, which are oval and prominent. *Rostrum* about as long as broad, broadest at the base and slightly narrowed in front; the posterior two-thirds scarcely punctate, broadly but shallowly impressed, and with a deep central furrow, the scales similar to those on the head; the apical area with much smaller, more widely separate and shiny scales, the apex shallowly emarginate; the lateral costæ only slightly curved inwards in front and subparallel behind, the longitudinal impression below them very shallow and indistinct, the upper edge of the scrobe passing close below the eye. *Antennæ* piceous, the funicle with the two basal joints equal, 3 slightly longer than 4, 7 as broad as long. *Prothorax* broader than long, the sides moderately rounded, broadest about the middle, the base gently rounded, distinctly broader than the apex, which is roundly produced in the middle; the upper surface uniformly rugose, slightly more convex longitudinally in the ♂, with a central stria extending from the base almost to the apex. *Scutellum* small, transverse, covered with dense overlapping whitish scales. *Elytra* broadly ovate, broader and more convex longitudinally in the ♀, the shoulders broadly rounded and moderately prominent, the sides subparallel thence to beyond the middle, the base shallowly sinuate at the scutellum, the apices separately pointed, but scarcely mucronate; the upper surface with shallow striæ containing punctures which are partly hidden by the scaling and are smaller behind, the intervals broad and finely coriaceous beneath the scaling, the scales very small and closely set, the setæ short, curved and flattened, being as large as or larger than most of the scales. *Legs* piceous, with brown and whitish scaling; the posterior pairs of femora externally brown at the base, the apical half or third whitish; the tibiæ brown externally and whitish internally, the front pair not very strongly curved, the external angles of the posterior corbels broadly rounded; front coxæ broadly separated.

Length, 6½–8 mm.; breadth, 2½–3½ mm.

CEYLON: Colombo (*G. Lewis*).

All the scales on the sternum and venter are fringed with minute hairs.

111. **Astycus lewisi**, sp. nov.

Colour black, the head and prothorax with separated small shiny whitish scales, the elytra with larger and more closely set, buff or greyish-buff scales.

Head shiny and sparsely punctate, with a narrow central furrow ascending to the vertex, and without lateral impressions; eyes oval and prominent. *Rostrum* longer than broad, the sides parallel from the base to beyond the middle, then slightly dilated; the basal two-thirds more or less shallowly impressed and with a deep central furrow, the lateral costæ obtuse and parallel, followed by a longitudinal furrow, but without any outer costa or anteocular impression, the upper edge of the scrobe passing quite close to the eye; apical area with smaller scales, the apex shallowly emarginate in the middle. *Antennæ* piceous brown, the funicle with joints 1 and 2 equal, 3 longer than 4, and 7 as long as broad (♂) or longer (♀). *Prothorax* as long as broad, the sides strongly rounded in ♂, less so in ♀, broadest at the middle, the base gently rounded and broader than the truncate apex; the upper surface more convex longitudinally in ♂, coarsely rugose, with a narrow and sometimes indistinct central stria which does not traverse the smoother apical area. *Scutellum* longer than broad, clothed with dense whitish scaling. *Elytra* broadly ovate and parallel-sided to beyond the middle (♀), or more elongate and narrowing more gradually from near the base (♂), the base jointly sinuate, the margin less raised than usual, the apices each produced into a fairly long sharp mucro, the shoulders prominent; the upper surface (when the scaling is intact) with the striæ very shallow and the punctures large in the basal half, the striæ becoming deeper and the punctures smaller behind, the intervals broad and flat, the 3rd not broader than the 4th, the posterior callus prominent; the scales larger than in allied species, of irregular shapes and closely set like a mosaic, forming irregular rosettes round the punctures, the setæ recumbent, minute and inconspicuous. *Legs* black, with greyish white scaling and a dense paler patch near the apex of the hind femora; the front tibiæ strongly incurved at the apex and with an unusually long internal apical mucro; the corbels of the hind tibiæ broad and quite flat, the upper margin rising above the dorsal plane of the tibiæ and forming a sharp right angle; front coxæ narrowly separated.

Length, 7–9 mm.; breadth, 2¼–3¼ mm.

CEYLON: Dikoya, 3800–4200 ft. (*G. Lewis*).

Types ♂ ♀ in the British Museum.

None of the scales on the metasternum and venter are fringed.

112. Astycus immunis, *Walk.*

Astycus immunis, Walker,* Ann. Mag. Nat. Hist. (3) iii, 1859, p. 263.
Strophosomus suturalis, Walker,* l. c. p. 262.
? *Arhines destructor*, Nietner, Rev. Zool. 1864, p. 120.

Colour black, with uniform green or coppery scaling, which is usually denser and more yellow along the sides of the prothorax and elytra.

Head shallowly punctate, the forehead plane, slightly wrinkled and with a narrow central furrow; eyes elliptical, moderately convex. *Rostrum* about as long as broad, slightly narrowed to the apex, more or less shallowly impressed above, with a very broad and deep central furrow on the basal two-thirds, and a single fairly sharp marginal carina, followed by a shallow longitudinal impression. *Antennæ* red-brown, the funicle with joint 1 longer than 2, 3 scarcely longer than 4, 7 transverse (♂) or as long as broad (♀). *Prothorax* about as long as broad in the ♂, broader than long in the ♀, its sides subparallel from the base to the middle, then narrowed in a curve to the apex, the basal margin shallowly bisinuate, the upper surface more convex longitudinally in the ♂, rugosely and confluently punctured, and with a deep narrow central furrow from the base nearly to the apex, the scales small and separated. *Scutellum* transverse. *Elytra* with the sides parallel from the shoulders to the middle in the ♂, slightly ampliated in the ♀, broadly rounded behind, the shoulders sloping and not prominent, the apices not mucronate, punctato-striate, the intervals broad, smooth and slightly convex; scales larger and much denser than on the prothorax, their surface uneven and scintillating in the ♂, more opaque in the ♀, the setæ minute and recumbent. *Legs* blackish; the tibiæ not sulcate, the upper edge of the hind corbels but little raised above that of the tibiæ and forming an obtuse angle at the end.

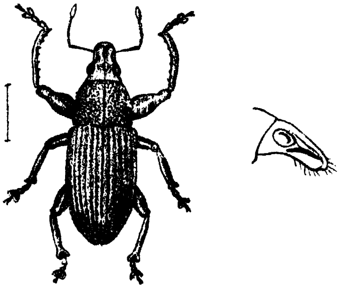
Fig. 48.—*Astycus immunis*, Walk.

Length, 5–7 mm.; breadth, 2¼–3¼ mm.
Ceylon: Haldamulla (*E. E. Green*).
Type ♀ in the British Museum.
This species exhibits the two following well-marked variations:—

A. immunis var. **bilineatus**, nov.

In this form the green scales on the suture and intervals 1, 3, 4 and 5 are much fewer and often absent, so that the green stripe on interval 2 stands out very conspicuously. The four examples I have seen are females.
Ceylon (*Dr. Thwaites*, *Col. Yerbury*).
Type ♀ in the British Museum.

A. immunis var. **suturalis**, *Walk.*

In this form there is is no green scaling at all. The prothorax is black with a broad whitish lateral stripe. The elytra are black with greyish-white scaling on intervals 1 and 2 and on the lateral parts from stria 6 to the margin, intervals 3–5 having only a few small spots of pale scaling, and the suture being black.
Ceylon.
Type ♀ in the British Museum.
Despite certain discrepancies, I have not much hesitation in attributing the description of *Arhines destructor*, Nietn. (I do not know where the type may be) to the typical form of this species. Concerning this insect Mr. James Rose, as quoted by Nietner (*op. cit.* p. 121), says: "The ravages which these insects commit [on coffee plants] are really terrible .... Five or six acres have been completely covered, and they have destroyed nearly all the leaves. This year they have appeared in great number, where they have covered at least 40 acres." Mr. E. E. Green informs me that this species also defoliates young tea plants.

113. **Astycus canus**, sp. nov.

Colour black, with fairly dense, uniform, shiny, greyish-white scales; a lateral stripe of denser scaling on the prothorax.
Head with scattered punctures and sparse scaling, the forehead smooth, shallowly impressed, and with a fine central furrow; eyes short, oval and moderately convex. *Rostrum* about as long as broad, slightly narrowing from the base to the middle, then widening again to the genæ; the broad and rather deep impression in the basal two-thirds contains the usual furrow, the single lateral costa rather prominent and followed by a broad longitudinal impression above the scrobe. *Antennæ* yellowish red, the funicle with joint 1 longer than 2, 3 a little longer than 4, and 7 as long as broad, its apex oblique (♀). *Prothorax* transverse, the sides moderately rounded, broadest near the base, which is gently rounded; the upper surface a little uneven, but scarcely rugose,

with a fine central stria ceasing at a little distance from the apex. *Scutellum* transverse. *Elytra* broadly ovate, the shoulders sloping, the sides gently rounded, broadest about the middle, the base slightly sinuate, the apices very shortly mucronate; the dorsal outline rather flat and continuous with that of the prothorax; the striæ shallow and the punctures indistinct, the intervals broad and flat, interval 3 distinctly broader than 2 or 4, the posterior callus obsolete; the scales of irregular shape, the setæ minute, recumbent and very inconspicuous. *Legs* piceous, with fairly close whitish scaling; the corbels of the hind tibiæ flat, their dorsal edge continuous with that of the tibia, the posterior angle rounded; the front coxæ distinctly separated.

Length, 8½ mm.; breadth, 3¾ mm.

CEYLON (*Dr. Thwaites*).

Type ♀ in the British Museum.

114. **Astycus horni**, sp. nov.

Colour black, with dense dark grey scaling, the prothorax with three very indistinct dark brown stripes, the elytra closely mottled with ill-defined dark brown patches.

Head with longitudinal wrinkles (hidden by the scaling) and a deep central furrow; eyes short, oval and moderately prominent. *Rostrum* as long as broad, parallel-sided, shallowly sinuate at the apex, plane above, with a narrow central furrow and a single lateral carina, without any lateral furrow in front of the eye. *Antennæ* piceous, the funicle with joint 1 much longer than 2, 7 distinctly transverse. *Prothorax* as long as broad, its sides rounded, broadest at middle, the apex much narrower than the base, which is subtruncate, rugosely and confluently punctate above and with a deep narrow central furrow from base to apex; the scales as large as those on the elytra, but not quite so dense. *Scutellum* transverse. *Elytra* with the sides parallel to the middle, the apex not emarginate and without any fringe of hairs, the punctures in the striæ diminishing behind, the intervals almost plane and much broader than the striæ, interval 3 not broader than 4, the setæ extremely short and depressed, not easily discernible. *Legs* piceous, with grey scaling; the tibiæ not furrowed, the hind pair not produced internally at the apex, the front pair with a few fine hairs internally in the ♂, the hind corbels flat, the dorsal edge on the same plane as that of the tibia and terminating in a sharp obtuse angle; the anterior coxæ contiguous.

Length, 5½–5¾ mm.; breadth, 2½ mm.

CEYLON: Nalanda (*Dr. Walther Horn*).

Types ♂ ♀ in the British Museum.

Genus **LEPIDOSPYRIS**, nov.

TYPE, *Astycophobus cretaceus*, Fst.

Head with the eyes quite lateral, the forehead almost as wide as the base of the rostrum. *Rostrum* longer than the head, with a median impression and a dorsal carina on each side, the apex with a fairly deep angular emargination; the scrobe curving downwards at some distance in front of the eye and but little dilated behind; mandibles with a prominent scar, the mentum with two or four setæ close to the front edge. *Antennæ, prothorax* and *elytra* as in *Astycus*, except as regards the scales, each of which has a boss-like elevation in the middle. *Sternum* with the front coxæ rather widely separated and very close to the front margin of the prosternum; the mesepimeron much smaller than its episternum, its outer margin distinctly sinuate; the metasternum slightly longer than the median coxæ. *Venter* and *legs* as in *Astycus*, except that the tibiæ are never sulcate, and the corbels of the hind pair are more or less clothed with scales internally.

Range. India.

The members of this genus are very similar to the small grey species of *Astycus* in general appearance, but may be distinguished by the scaly corbels of the hind tibiæ, and by the embossed and overlapping scales of the upper surface.

Key to the Species.

1 (4) Rostrum not broader at the base than at the apex; prothorax broadest at or before the middle; elytra with the basal margins jointly sinuate and vertically truncate.
2 (3) Prothorax strongly convex on the disk and very coarsely sculptured . . . . . . *cretaceus*, Fst., p. 153.
3 (2) Prothorax flattened in the middle of the disk, the sculpturing so fine that it is completely hidden by the scaling. *angustulus*, sp. n., p. 155.
4 (1) Rostrum evidently broader at the base than at the apex; prothorax broadest at the base; elytra with the basal margins separately rounded and projecting over the base of the prothorax. *demissus*, sp. n., p. 154.

115. **Lepidospyris cretacea,** *Fst.*

Astycophcbus cretaceus, Faust,* Deut. Ent. Zeit. 1897, p. 348.

Colour black, with dense chalky grey scaling, sometimes with a pinkish metallic reflexion; the scaling on the disk of the prothorax more or less abraded.

***Head* shallowly punctate, the forehead with a central furrow**

ascending to the vertex; eyes short, oval, moderately prominent. *Rostrum* about as long as broad, parallel-sided, broadly impressed above, with two lateral carinæ on each side and a narrow central furrow in the basal half only. *Antennæ* blackish, the funicle with joint 1 thicker and slightly longer than 2, 3 a little longer than 4, 7 slightly transverse, the club broadly ovate. *Prothorax* as long as broad, its sides rounded, broadest at middle, shallowly constricted at the apex which is narrower than the base, the upper surface strongly convex, rugosely and confluently punctate, the interstices somewhat vermiculate, with a rather shallow central furrow extending from the base to beyond the middle, the basal margin shallowly bisinuate. *Scutellum* transverse. *Elytra* with the sides parallel from the shoulders to beyond middle, scarcely acuminate behind, the apices jointly emarginate, evidently punctato-striate, the punctures becoming much fainter posteriorly, the intervals smooth, much broader than the striæ and almost plane, 2 not broader than 3; the setæ short and curved, the apical margin with a fringe of fine hairs. *Legs* black, with dense grey scaling; the tibiæ not furrowed, the posterior pair not produced internally at the apex and with the corbel shortly ascending the dorsal edge, the anterior tibiæ of the ♂ with an internal fringe of very long hairs.

Anal segment of the ♀ strongly transverse and simply rounded at the apex..

Length, $7\frac{1}{4}$–$8\frac{1}{2}$ mm.; breadth 3–$3\frac{3}{4}$ mm.

BOMBAY: N. Kanara (*T. R. D. Bell*). UNITED PROVINCES: Kathgodam, 1200 ft., Kumaon (*S. W. Kemp*—Ind. Mus.).

Type in the Dresden Museum.

116. **Lepidospyris demissa**, sp. nov.

Colour black, with dense overlapping grey or greyish-brown scales, the elytra occasionally having rows of whitish spots along some of the striæ.

Head slightly more convex in ♂ than in ♀, with a fine central stria almost concealed by the scaling, and set with very broad subrecumbent scale-like setæ; when the scaling is abraded the head is rather rugosely coriaceous; eyes rather small, shortly ovate, very prominent and subconical. *Rostrum* as long as its basal width, slightly narrowed from base to apex, the sides almost straight, with a broad impression in the basal half containing a central stria, the inner carinæ dorsal in position and strongly convergent behind, the upper edge of the scrobe curving downwards a long way in front of the eye; the scaling very dense throughout, interspersed with numerous broad curved setæ. *Antennæ* piceous, the funicle with joint 1 longer and stouter than 2, joints 4 and 5 equal and slightly transverse, 3 a little longer, 7 slightly transverse. *Prothorax* broader than long, broadest quite close to the base, thence narrowed to the apex, the sides only slightly rounded, the base shallowly bisinuate, the dorsum less convex than usual and with slight inequalities visible through the dense scaling; the setæ are so minute and depressed as to be observable with difficulty, but near the posterior angles there is a group of erect flattened setæ. *Scutellum* almost circular. *Elytra* with the sides subparallel from the shoulders to beyond the middle, separately rounded at the base, the apices jointly subacuminate and with a tuft of short setæ, shallowly punctato-striate, the dorsal striæ sometimes almost hidden by the scaling, the intervals broad and plane, granulately rugose when abraded, a shallow impression on each side of the suture at the base; the setæ short, depressed and inconspicuous, the apical margin scarcely fringed. *Legs* with dense grey scaling; the hind tibiæ with the corbels slightly ascending the dorsal edge; the posterior intercoxal process with a tuft of setæ.

Anal segment of the ♀ transverse, shallowly impressed.

Length, 6–7 mm.; breadth, $2\frac{1}{4}$–3 mm.

UNITED PROVINCES: Dehra Dun.

Type in the British Museum.

117. **Lepidospyris angustula**, sp. nov.

Colour black, with dense pale sandy scaling, having a slight coppery reflexion and variegated with small darker markings.

Head with fine shallow punctation hidden by the scaling, the forehead with a narrow central furrow ascending the vertex; eyes small, short, ovate and rather prominent. *Rostrum* as broad as long, slightly narrowed from the base to the apex, shallowly depressed above, with a narrow central furrow and two carinæ on each side enclosing a longitudinal impression which is almost obscured by the scaling. *Antennæ* red-brown, the funicle with joints 1 and 2 equal, 3 and 4 equal, 7 subconical and as long as broad. *Prothorax* as long as broad, its sides slightly rounded, broadest about the middle, shallowly constricted near the apex,

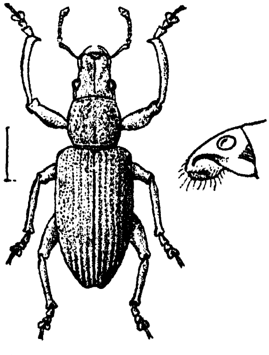

Fig. 49.—*Lepidospyris angustula*, Mshl.

which is scarcely narrower than the base, the basal margin truncate, finely coriaceous above and with a fine central stria which does not reach the apex. *Scutellum* transverse. *Elytra* rather narrow, jointly sinuate at the base, parallel-sided from the shoulders to beyond the middle (♂), the apices each with a small divergent mucro, punctato-striate, the punctures not diminishing behind, the intervals broad, smooth and slightly convex; the setæ short and subdepressed, but forming a slightly longer apical fringe. *Legs* with dense pale scaling; the hind tibiæ not produced at the inner apical angle and with the corbels scarcely ascending the dorsal edge.

♀ unknown.

Length, 5½ mm.; breadth, 2 mm.

BOMBAY: Matheran, 2500 ft.

Type ♂ in the British Museum.

Genus **TYLOPHOLIS**, nov.

TYPE, *Tylopholis ballardi*, sp. nov.

Head convex, the eyes quite lateral. *Rostrum* short, but longer than the head, scarcely broader than the forehead at the base, curved downwards, the outline of the lower surface not parallel with the upper, but sinuate and forming a rounded acute angle with the underside of the head; the apex shallowly emarginate in the middle, the scrobe linear and rather sharply curved downwards at some distance in front of the eye; mentum rather deeply sunk, trapeziform, with an oblique carina on each side and two stout setæ near the front margin; submentum perpendicular to the plane of the mentum and with two rounded impressions. *Antennæ* with the scape rather short, impunctate, cylindrical, slender and sharply clavate, directed so much downwards at rest that it scarcely reaches the anterior margin of the eye; funicle with the two basal joints longer, the rest bead-like, the club 4-jointed. *Prothorax* with the basal margin truncate or rounded, broader than the apex. *Scutellum* small, but distinct. *Elytra* jointly truncate at the base, the basal margin raised and not broader than the base of the prothorax, shoulders entirely absent, stria 10 coalescing with 9 for a short distance above the hind coxæ, the lateral margin not notched near the base. *Sternum* with the front coxæ separated and nearer the anterior margin of the prosternum; mesepimeron narrow, much smaller than its episternum; metasternum not longer than the median coxæ, the episternal suture distinct throughout. *Venter* with the inter-coxal process rounded and much narrower than the coxa, segment 2 much longer than 3+4 and separated from 1 by a curved line. *Legs* moderate, the front pair not longer than the others; the front tibiæ denticulate internally, the anterior pairs with a perpendicular apical mucro, but not the hind pair, the corbels of which are broadly enclosed and partly covered with scales internally;

femora clavate, unarmed, the middle pair more slender than the others; tarsi rather slender, the third joint dilated, the claws connate.

Range. India.

Distinguished from *Sympiezomias* and *Leptomia* by the squamose corbels of the hind tibiæ, the structure of the submentum, and by the rounded boss in the middle of each scale.

Key to the Species.

1 (2) Head not impressed behind the eyes, which are flat; base of the prothorax not marginate .... *ballardi*, sp. n., p. 157.
2 (1) Head transversely impressed behind the eyes, which are prominent; base of the prothorax distinctly marginate........ *obovata*, sp. n., p. 158.

118. **Tylopholis ballardi**, sp. nov.

Black, with uniform pale grey scaling above and below, and usually with an indistinct paler lateral stripe on the elytra; the scales round and overlapping.

Head rather strongly convex transversely, the rugose sculpturing entirely hidden by the scaling, which also almost conceals the frontal stria. *Rostrum* a little broader than long, broadest at the base and distinctly narrowed in front, the upper surface almost flat, with a partly concealed central furrow in the basal half, and on each side a very faint ridge running from above the antenna obliquely backwards and inwards, the dorsal margins rounded. *Antennæ* testaceous brown, with the scape moderately curved; the funicle with joint 1 distinctly longer and stouter than 2, the remainder short, bead-like and gradually widening outwardly. *Prothorax* distinctly broader than long, the sides subparallel from the base for a short distance and thence narrowed to the apex, without any basal or apical constriction; the upper

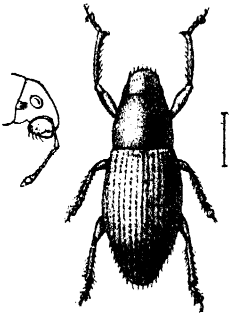

Fig. 50.—*Tylopholis ballardi*, Mshl.

surface evenly set with small flattened granules, but these are entirely hidden by the scaling, so that the surface appears quite smooth and without any stria or carina. *Elytra* subelliptical, broadest a little behind the middle, the base not broader than that of the prothorax, the apex with two short parallel mucros, the striæ shallow, but the partly covered punctures clearly visible through the scaling; the intervals broad, plane and closely set with depressed granules, which are hidden by the overlapping scales; the setæ fairly stout, slightly flattened and suberect on the disk, longer and more erect on the apical area. *Legs* piceous, with dense pale umbilicated scales.

Length, 6½–7 mm.; breadth, 2½–3 mm.

MADRAS: Yemmiganur, Bellary District.

Type ♂ in the British Museum.

The species was forwarded by Mr. E. Ballard, Government Entomologist of Madras, with the note that it was attacking the stems of Bengal gram.

119. **Tylopholis obovata**, sp. nov.

Colour piceous, densely clothed with uniform dark grey scaling having a slight metallic reflexion; scales of irregular shape and not overlapping.

Head with a broad shallow transverse impression behind the eyes, which are almost circular and very convex, the forehead scarcely narrower than the base of the rostrum and with a shallow central stria. *Rostrum* as long as broad, slightly narrowed from base to apex, the sides almost straight, the upper surface broadly impressed in the middle, with a central stria in the basal half continuous with that on the forehead, and on each side of it an oblique carina, beyond which is a shallow longitudinal impression; some moderately long erect white setæ on the genæ. *Antennæ* red-brown, the funicle with joint 1 as long as but stouter than 2, the remainder about as long as broad, 7 much larger than the others. *Prothorax* broader than long, the sides moderately rounded, broadest behind the middle, not constricted near the apex, the base broader, truncate and distinctly marginate; upper surface uneven, except on the apical area, but the sculpturing hidden by the scaling, with no central furrow or carina. *Elytra* broadly ovate, the sides moderately rounded, broadest rather behind the middle and somewhat obtuse behind, the base deeply sinuate, the margin strongly raised and projecting at the basal angles, the apices separately pointed; with shallow punctate striæ, the intervals broad, flat and finely granulate, but the granules entirely hidden by the scaling, the setæ short, flattened and erect, interval 3 not impressed at the base like the rest. *Legs* piceous, with dense uniform scaling and suberect pale setæ.

Length, 7 mm.; breadth, 3 mm.

MADRAS: Vizagapatam.

Type ♀ in the British Museum.

Genus SYMPIEZOMIAS.

Sympiezomias, Faust, Horæ Soc. Ent. Ross. 1887, p. 5.
Piazomias (part.), Lacordaire, Gen. Coleopt. vi, 1863, p. 90.

TYPE, *Brachyaspistes velatus*, Chev. (China).

Head with the eyes lateral, broadly oval and moderately prominent, the forehead not or but slightly narrower than the base of the rostrum. *Rostrum* longer than the head, about as long as broad (except in the type and a few other species, in which it is longer), not or very shallowly emarginate at the apex, always with a central furrow and also a lateral furrow bordered on each side by a carina; the scrobes sublinear and nearly always curving downwards at some distance from the eye. *Antennæ* with the scape hardly exceeding the middle of the eye, cylindrical, slender at the base, rather abruptly clavate and curving slightly forwards when erect; the funicle with the two basal joints more elongate and subequal (except in *S. kraatzi* and *S. cuprescens*), joints 3–6 subequal and generaly bead-like, 7 rather longer, broader and subconical, the club ovate and distinctly 4-jointed. *Prothorax* truncate at base and apex, the basal margin narrowly raised, the sides rounded, the apex narrower than the base, the gular margin narrowly sinuate, the coxæ either separated or contiguous and much nearer the front edge of the prosternum. *Scutellum* present, but small. *Elytra* ovate, narrowly marginate at the base, without true shoulders, but often with a humeral fold or ridge, the lateral margin shallowly sinuate above the hind coxæ, but without a distinct excision to receive the head of the metasternal episternum, though traces of this may be seen in *S. acutipennis* and *S. prasinus*. *Sternum* with the mesosternal epimera narrow, much smaller than the episterna and not separating them from the base of the elytra; the metasternum as long as or slightly shorter than the median coxæ, the episterna narrow, the episternal suture distinct throughout; the hind coxæ not reaching the elytra. *Venter* with the intercoxal process rounded or subtruncate, segment 2 equal to or longer than 3+4. *Legs* of variable length, the femora clavate, the front pair slightly thicker than the others; the front tibiæ longer than the rest, strongly curved, denticulate internally and with a sharp apical spine directed inwards at right angles; the median pair straight, produced internally at the apex and having there a short slender spine; the hind pair straight and not produced internally at the apex, the corbels enclosed and slightly ascending the dorsal edge.

Range. India, Burma, Malay States, Siam, China and Japan.

This genus forms one of the links which unite the flying TANYMECIDES with the group in which functional wings are absent. For many of the species possess a humeral fold or false shoulder, giving them a close resemblance to the smaller species of *Astycus*, with which indeed Schönherr associated them. Several of them also exhibit traces of the small basal lateral notch on the elytra, which is characteristic of the genera having functional wings; while the fact that the episternum is in no way fused with the metasternum suggests that the power of flight has been lost somewhat recently. But these species can at once be distinguished from *Astycus* by their non-functional hind wings, by the comparatively small size of the epimera of the mesosternum and the relatively shorter metasternum.

Throughout most of the genus the external structure is very uniform, and an examination of the ♂ genitalia has been necessary; but in many cases colour appears to furnish quite a reliable specific character.

Key to the Species.

1 (28) Second ventral segment longer than 3+4, the suture between segments 1 and 2 evenly marked throughout; intercoxal process of venter rounded or subangulate.

2 (27) Corbels of hind tibiæ not clothed with long hairs.

3 (26) Hind tibiæ not denticulate internally; the two basal joints of funicle subequal; rostrum not or but very slightly longer than broad.

4 (11) Elytra with more or less metallic green scaling.

5 (8) Apices of elytra not mucronate in the ♂ and scarcely so in the ♀.

6 (7) Scaling grey or brown, sometimes with a pale metallic green reflexion; rostrum impressed dorsally; the basal margin of the elytra very little raised, the humeral projection continued right up to the base........... *lividus*, sp. n., p. 166.

7 (6) **Scaling bright green or bluish, the inflexed margins yellowish, elytra with a common yellow patch at base and apex of intervals 4 and 5; rostrum plane dorsally; basal margin of the elytra distinctly raised, the humeral projection separated from the actual basal margin**..................... *frater*, sp. n., p. 164.

8 (5) **Apices of elytra distinctly mucronate in both sexes; scaling bright green, with the base of prothorax and the inflexed margins of prothorax and elytra yellowish.**

9 (10) Humeral fold of elytra forming a distinctly projecting angle, especially in ♀; interval 3 higher than 2 near the apex; the scaling not or but slightly metallic .... *prasinus*, Boh., p. 162.

10 (9) Humeral fold not forming a projecting angle; interval 3 not higher than 2 on the declivity; scales metallic, highly polished and glittering .... *præteritus*, sp. n., p. 163.

11 (4) Elytra without green scaling.

12 (17) Elytra more or less strongly impressed on the declivity.

13 (16) Elytra without erect setæ.

14 (15) Elytra with a whitish sutural stripe and a broad yellow discal stripe on each, the outline of the posterior declivity straight or slightly convex................ *perroteti*, Boh., p. 164.

15 (14) Elytra with grey scaling which is paler laterally, the outline of the posterior declivity distinctly sinuate .... *acutipennis*, Boh., p. 165.

16 (13) Elytra with short erect setæ...... *hispidus*, sp. n., p. 166.

17 (12) Elytra not impressed on the declivity.

18 (19) Elytra with the basal margin only very slightly raised, the external angle (as seen from above) forming an obtuse angle; rostrum with a broad dorsal impression in addition to the furrow ...... *lividus*, sp. n., p. 166.

19 (18) Elytra with the basal margin strongly raised, the external angle a right or acute angle; rostrum plane dorsally ....

20 (23) Elytra with uniform grey scaling, without any pollinose lateral stripe; the setæ as sparse on interval 6 as on the disk; male without any apical mucros.

21 (22) Elytra with the longitudinal curvature very convex, deepest near the middle and gradually sloping behind; setæ on the first two ventral segments short and flattened; male organ with marked coriaceous sculpturing, the apex sharply pointed .... *cretaceus*, Fst., p. 167.

22 (21) Elytra with the longitudinal curvature less convex, deepest near the base and becoming abruptly steeper on the posterior declivity; setæ on the first two ventral segments longer and fine; male organ with the sculpturing extremely fine, the apex broadly rounded .. *decipiens*, sp. n., p. 167.

23 (20) Elytra with a broad lateral yellow pollinose stripe; interval 6, and part of 5 and 7, with dark curved broad setæ, which are much broader and more numerous than those on the disk; elytra of ♂ with short apical mucros.

24 (25) Dorsal carinæ on rostrum gradually convergent behind; pronotum finely granulate; second joint of tarsi bearing at least a few scales. *sulphuratus*, sp. n., p. 167.

25 (24) Dorsal carinæ on rostrum parallel in the basal half; pronotum rugosely granulate; second joint of tarsi entirely devoid of scales.. *anamalainus*, sp. n., p. 168.

26 (3) Hind tibiæ strongly denticulate internally; joint 1 of the funicle distinctly longer than 2; rostrum longer than broad .... *serratipes*, sp. n., p. 169.

27 (2) Corbels of hind tibiæ clothed with dense long yellow hairs (fig. 52); joint 1 of funicle distinctly longer than 2 .... *kraatzi*, Hel., p. 169.

28 (1) Second ventral segment not longer than 3+4; the suture between segments 1 and 2 more or less effaced in the middle; intercoxal process of venter broadly truncate; rostrum much longer than broad.

29 (30) Sides of prothorax and elytra covered with metallic green scaling; legs red-brown; elytra with the sides less rounded, narrower at the base, and more produced at the apex; male organ very long and distorted (fig. 54)...................... *metallescens*, sp. n., p. 170.

30 (29) Sides of prothorax without green scaling, elytra with only a small humeral spot and a few scattered metallic scales along the sides; legs black; elytra with the sides more strongly rounded, less narrowed at the base, and more rapidly acuminate at the apex; male organ short and normal (fig. 54)...................... *similis*, sp. n., p. 171.

120. **Sympiezomias prasinus**, *Boh.*

Brachyaspistes prasinus, Boheman,* Schönh. Gen. Curc. viii, pt. 2, 1845, p. 416.

Colour black, with uniform dense green or blue-green scaling, sometimes with finely interspersed dark scales; the sides and basal margin of the prothorax, and the inflexed margins of the elytra with more or less distinct sulphur-yellow powdering; the scaling not or but slightly metallic.

Head convex, the scattered punctation hidden by the dense scaling, the rostral furrow sometimes extending narrowly on to the forehead. *Rostrum* impressed dorsally in the middle and with a short deep central furrow. *Prothorax* slightly broader than long, the sides rounded, broadest about the middle, with shallow confluent punctation above, the intervals coriaceous or obscurely granulate, with a shallow impression on each side behind the middle and usually with a faint central stria near the base. *Elytra* narrowly ovate in ♂, broader in ♀, with a distinct and rather prominent humeral fold, the basal margin only slightly raised, the apices with distinct sharp mucros in both sexes, finely punctato-striate, with a shallow impression on the declivity, the intervals broad, almost plane and of even height, the setæ inconspicuous, the declivity not impressed.

Length, $6\frac{1}{4}$–$9\frac{1}{2}$ mm.; breadth, $2\frac{3}{4}$–$4\frac{1}{4}$ mm.

MADRAS: Malabar; Nilgiri Hills, 5000 ft. (*H. L. Andrewes*).

Type in the Stockholm Museum.

The following variety appears to occur in company with the typical form.

S. prasinus var. **subcostatus**, nov.

Differs from the typical form in having the intervals 3, 5 and 7 of the elytra slightly broader and more raised, and the basal margin of the elytra is also somewhat more elevated.

MADRAS: Nilgiri Hills, 5000 ft. (*Sir G. Hampson*, *H. L. Andrewes*).

Type ♂ in the British Museum.

Pronounced examples of this variety appear very different from the typical form, but they certainly grade into one another, and in the case of the only ♂ that I have dissected the genitalia are indistinguishable from those of typical *S. prasinus*.

121. **Sympiezomias præteritus**, sp. nov.

Colour black, with glittering metallic green scaling, the inflexed sides of the prothorax and elytra and the base of the prothorax yellowish; the green of the elytra sometimes partly replaced by pale fawn scaling (? immature).

Extremely close to *S. prasinus*, Boh., from which it differs in the following characters:—The elytra are slightly more elongate and the basal margin more raised; the humeral fold is much less developed, being practically absent in the ♂, while in the ♀ it does not project beyond the lateral outline of the elytra as seen from above; the scaling is also characteristic, the scales having flattened, highly polished surfaces which produce a glittering effect that is never seen in *S. prasinus*; the dorsal outline of the elytra is a little less convex near the base, and the third interval is not higher than the second on the declivity, as it is in *S. prasinus*. The differences in the male organ are slight, but constant; in *prasinus* it is deeper towards the apex than in the middle, whereas it is of even depth in *præteritus*, in which also the projecting spatula is a little longer and broader and more curved up at the tip.

Length, 5½–8½ mm.; breadth, 2¼–3¾ mm.

MADRAS: Naduvatam, 6000–6500 ft., Nilgiri Hills (*H. L. Andrewes*).

Types ♂ ♀ in the British Museum.

122. **Sympiezomias frater**, sp. nov.

Colour black, with dense uniform metallic green or bluish scaling, the under surface and the inflexed margins of the prothorax and elytra usually with yellow powdering, the elytra having also a similar elongate yellow patch at the base of the intervals 4 and 5, and another smaller one at the apex of the same intervals.

Head with fine scattered punctation and without a central stria. *Rostrum* plane dorsally, the furrow very short and broad. *Prothorax* as in *S. prasinus*, Boh., but without any central stria. *Elytra* with the basal margin distinctly elevated, the humeral fold present but not very prominent, the apices almost rounded in the ♂, only slightly mucronate in the ♀, finely punctato-striate, the intervals even and almost plane, interval 3 not higher than 2 on the declivity, which bears no impression; the setæ small, but distinct.

Length, 5½–6½ mm.; breadth 2¼–3 mm.

MADRAS: Nilgiri Hills (*Sir G. Hampson*—types, *H. L. Andrewes*); Coorg; Palur (*G. Lund*); Yercaud, Shevaroy Hills, 4500 ft. (*T. B. Fletcher*—Pusa Coll.).

Types ♂ ♀ in the British Museum.

Very closely allied to *S. prasinus*, Boh., and *S. præteritus*, sp. n., but distinguished by the obtuse apices of the elytra, the even surface of the declivity, and the more conspicuous setæ on it; the last ventral segment of the ♀ also has no central elevation; the male organ differs in having the spatula shorter and quite straight, without any upward curve.

123. **Sympiezomias perroteti**, *Boh.*

Brachyaspistes peroteti, Boheman,* Schönh. Gen. Curc. viii, pt. 2, 1845, p. 416.

Colour black, with blackish scaling and yellow and white stripes; the prothorax black on the disk, sulphur-yellow below, with a broad yellow band ascending the apical and basal margins as far as the edge of the disk, the median lateral area with sparse grey scaling; elytra with a broad yellow stripe along the extreme edge, but ceasing before the apex, a similar stripe on intervals 5 and 6, encroaching a little on 4 and 7 at the base, and a narrower white stripe along the suture from the base to the declivity.

Head with very fine shallow punctation. *Rostrum* finely punctate, not impressed dorsally and with a very short central furrow. *Prothorax* a little broader than long, the sides very slightly rounded and broadly constricted at the apex, finely coriaceous above and with a faint central stria from the base to beyond the middle. *Elytra* rather narrowly ovate, the humeral fold slight and not forming a prominent tubercle, the apices separately and sharply mucronate, deeply punctato-striate, the intervals rather narrow and slightly convex, with short white setæ on the declivity, which is distinctly impressed.

Length, $5\frac{1}{2}$–8 mm.; breadth, 2–$3\frac{1}{4}$ mm.

MADRAS: Pondicherry (*Perrotet*).

Type in the Stockholm Museum.

124. Sympiezomias acutipennis, *Boh.*

Brachyaspistes acutipennis, Boheman,* Schönh. Gen. Curc. viii, pt. 2, 1845, p. 415.

Colour black, with chalky-white scaling (usually more or less tinged with yellow at the sides) which is sparse on the disk, but much denser laterally and beneath.

Head finely coriaceous and with scattered coarse punctures, the forehead without a central stria. *Rostrum* about as long as the width at the base, shallowly impressed above, coarsely punctate and with a deep short central furrow. *Prothorax* broader than long in the ♀, slightly longer than broad in the ♂, obliquely truncate laterally at the apex, sides slightly rounded, broadest about the middle, rather strongly constricted at the apex, the upper surface finely sculptured, with the shallow confluent punctation usually hidden by the scaling and without any central

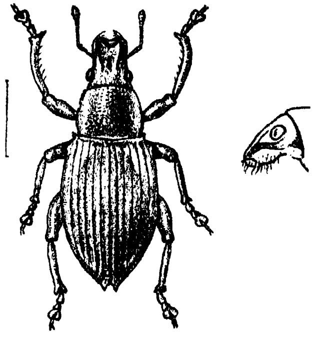

Fig. 51.—*Sympiezomias acutipennis*, Boh.

stria. *Elytra* broadly ovate, with a distinct humeral fold, slightly broader behind the middle, strongly compressed posteriorly, the apex sharply mucronate in both sexes, finely punctato-striate, the intervals broad and convex, the setæ very short and depressed, more noticeable on the declivity.

Length, ♂ 6–6½, ♀ 7–7½ mm.; breadth, ♂ 2¾–3, ♀ 3¼–3½ mm.

MADRAS: Pondicherry; Malabar; Pillur, 5000 ft., Nilgiri Hills (*Capt. A. K. Weld Downing*).

Type ♀ in the Stockholm Museum.

125. **Sympiezomias hispidus**, sp. nov.

Colour black, densely clothed with intermingled black and grey scales, the latter predominating at the sides and often having a coppery reflexion.

In general appearance and structure very similar to *S. acutipennis*, Boh., but readily distinguished by the presence of erect setæ on the elytra, especially in the apical half; in addition to this, the prothorax is more coarsely sculptured, the posterior declivity of the elytra slopes much more gradually, and its outline is straight and not sinuated.

Length, 6–9 mm.; breadth, 2¼–4 mm.

MADRAS: Parambikulam, 1700–3200 ft., Cochin State (*F. H. Gravely*).

Type in the Indian Museum.

126. **Sympiezomias lividus**, sp. nov.

Colour black or piceous, with dense greyish scaling, varied with small vague darker markings, or else with brownish scaling and paler markings; the scales generally with a pale greenish reflexion.

Head convex, with fine scattered punctation. *Rostrum* with a distinct dorsal impression and the usual central furrow. *Prothorax* slightly broader than long, the sides more rounded and narrower in front in the ♀ than in the ♂, the upper surface with shallow subconfluent punctation, usually more or less hidden by the scaling, with a fine central furrow in the basal half and a very shallow lateral impression behind the middle. *Elytra* with the basal margin only slightly raised, the humeral prominence distinct, having almost the appearance of a true shoulder, so that the external basal angle is an obtuse angle, the apices not or scarcely mucronate, the striæ with comparatively large and deep punctures, the intervals not much broader than the striæ, 3 and 5 often broader than the others, the intervals usually of equal height, but sometimes the alternate ones are slightly more raised, the setæ inconspicuous.

Length, 5½–7¾ mm.; breadth, 2½–3½ mm.

MADRAS: Nilgiri Hills (*Sir G. Hampson*).

Types ♂ ♀ in the British Museum.

127. **Sympiezomias cretaceus**, *Fst.*

Sympiezomias cretaceus, Faust,* Deut. Ent. Zeit. 1897, p. 340.

Colour black, with uniform chalky-white scaling in perfect specimens, but generally with the dorsal parts more or less abraded.

Head convex, with scattered deep punctation. *Rostrum* plane above. *Prothorax* a little broader than long in both sexes, with coarse confluent punctation on the disk, the interspaces granulate, the apical margin almost vertically truncate laterally. *Elytra* not impressed on the declivity, the basal margin strongly raised, the humeral fold distinct, the apices rounded in the ♂, separately pointed but not truly mucronate in the ♀, the dorsal outline very convex, deepest near the middle and gradually sloping behind, rather deeply punctato-striate, the intervals slightly convex and with short curved setæ.

Length, 6–6½ mm.; breadth, 2¾–3 mm.

BOMBAY: N. Kanara (*T. R. D. Bell*). MADRAS: Bangalore, 3000 ft. (Ind. Mus.); Pondicherry; Madura (*C. Somers Smith*—type); Bailur Forest, Coimbatore (*T. V. Ramakrishna*); Nilgiri Hills (*H. L. Andrewes*).

Types ♂ ♀ in the Dresden Museum.

128. **Sympiezomias decipiens**, sp. nov.

Colour black, with dense sandy-grey or greenish-grey scaling.

Very closely allied to *S. cretaceus*, Fst., from which it differs as follows:—

Rostrum with the central furrow relatively shorter. *Prothorax* as long as broad in the ♂. *Elytra* with the humeral fold slightly more prominent, the intervals less convex, the dorsal outline also less convex, deepest near the base, then gradually sloping backwards and becoming abruptly steeper behind, the apices in the ♀ each with a distinct short mucro. The setæ on the two basal ventral segments are longer and finer. The male organ has much finer and less distinct surface sculpturing, and the spatula is very differently shaped, all its edges being raised, so that it has the shape of an elongate spoon, with the apex broadly rounded; whereas in *S. cretaceus* the spatula is very short and sharply pointed, and the edges are not raised.

Length, 5½–6 mm.; breadth, 2–2¼ mm.

MADRAS: Nilgiri Hills (*Sir G. Hampson*—types); Kallar, 1000 ft., Pillur, 3000 ft., and Bhavani Valley, 3000 ft., Nilgiris (*H. L. Andrewes*); Hulikal, 6000 ft., Nilgiris (*Capt. A. K. Weld Downing*); injuring young cinchona trees, Kukal Orange Valley, Nilgiris; Pirmaad, Travancore (*Mrs. R. S. Imray*).

129. **Sympiezomias sulphuratus**, sp. nov.

Colour black, dorsally with more or less thin grey scaling, which is usually denser along the suture of the elytra; the underparts and a broad lateral stripe on the prothorax and elytra covered with bright yellow powdering, the yellow colour being very rarely more or less replaced by bright rose-pink.

Head with deep scattered punctation, the rostral furrow sometimes encroaching on the forehead. *Rostrum* plane above and with a broad central furrow, the dorsal carinæ gradually convergent behind. *Prothorax* a little broader than long, the sides slightly rounded, broadest about the middle, the apical margin obliquely truncate at the sides, the upper surface with shallow confluent punctation which is more or less hidden by the scaling, and often with a faint abbreviated stria in the middle. *Elytra* with the basal margin distinctly elevated, the humeral fold rather feeble, especially in the ♂, the dorsal curvature somewhat flat, but steeply declivous behind, the apices scarcely mucronate in the ♂ and with a short mucro in the ♀, strongly punctato-striate but with the punctures partially hidden by scaling, the dorsal intervals a little narrower than the striæ in the ♂, broader in the ♀, the longitudinal curvature very flat and becoming abruptly steeper on the declivity, which is not impressed; the setæ short, broad and curved, and much more numerous in the lateral stripe than on the disk.

Length, 5–7 mm.; breadth, 2½–3½ mm.

MADRAS: Nilgiri Hills, 5000 ft. (*H. L. Andrewes*—types); Coonoor (*Maindron*).

Types ♂ ♀ in the British Museum.

130. **Sympiezomias anamalainus**, sp. nov.

Colour black, with thin grey or bluish-grey scaling; the prothorax with an ochreous yellow lateral stripe; the elytra with a similar stripe on intervals 6 and 7, extending inwards at the base and near the apex as far as interval 4, and with some ochreous scaling along the margin.

Very closely allied to *S. sulphuratus*, sp, n., with the following differences:—Head finely punctate, the forehead with a central stria, which sometimes extends up to the vertex; the rostrum shallowly impressed dorsally, and with the dorsal carinæ parallel posteriorly; the prothorax more coarsely sculptured; the elytra with the sides more rounded, and the discal setæ much smaller, microscopic; the second tarsal joint without a trace of true scales. The male organ is not deeper towards the apex than in the middle, and the spatula is not nearly so sharply pointed. This organ is very similar to that of *S. acutipennis*, Boh., but the latter is more pointed and more curved upwards at the tip. This species differs also in having the head more coarsely punctate and without a central stria, and the eyes less convex; the prothorax is more finely sculptured; the elytra lack the stripe of dense broad setæ towards the sides, and there is a strong impression on the declivity.

Length, ♂ 5½–8½, ♀ 7–11 mm.; breadth, ♂ 2½–4, ♀ 3½–5¼ mm.
MADRAS: Anamalai Hills, 3500–4000 ft. (*H. L. Andrewes*).
Types ♂ ♀ in the British Museum.

131. Sympiezomias serratipes, sp. nov.

Colour black, with grey scaling having a strong coppery reflexion, turning to greenish laterally and below, and with a darker central stripe on the pronotum; sometimes the whole of the scaling above is metallic green, except for the broad coppery stripe on the pronotum, which is continued more vaguely on the elytra.

Head with a broad transverse impression behind the eyes and a distinct central furrow, which ascends nearly to the vertex, longitudinally striolate, but the sculpturing hidden by the scaling. *Rostrum* evidently longer than broad, scarcely impressed above, longitudinally wrinkled and with a very broad central furrow, the dorsal carinæ well-marked and gradually converging behind. *Antennæ* with joint 1 of the funicle much longer than 2. *Prothorax* somewhat broader than long, the sides slightly rounded, broadest about the middle, the apex not much narrower than the base, the apical margin slightly oblique laterally, the pronotum rugosely sculptured and with a shallow central furrow throughout. *Elytra* ovate, the sides strongly rounded, broadest behind the middle, rather abruptly and sharply pointed at the apex in the ♀, more blunt in the ♂, but not mucronate in either sex, the basal margin distinctly elevated, but no trace of a humeral fold; the dorsal outline rather flat, the posterior declivity steep and not impressed, the apex somewhat produced downwards in the ♀; the intervals broad and even, the setæ short, broad and curved, only conspicuous posteriorly. *Legs* with the hind tibiæ strongly denticulate internally, the second tarsal joints without any true scales.

Length, 7–9 mm.; breadth, 3–4¼ mm.
BURMA: Maymyo (*H. L. Andrewes*).
Types ♂ ♀ in the British Museum.

132. Sympiezomias kraatzi, *Heller*.

Sympiezomias kraatzi, Heller,* Deut. Ent. Zeit. 1891, p. 340.

Colour black, the head and prothorax with small sparse brownish-grey scales, the latter having also a broad lateral stripe of large greenish-yellow scales extending from the base to about the middle, the elytra with dense brownish-grey scaling, variegated with pale yellow along the base and with scattered large green scales along most of the striæ; the underparts with thin greyish scaling.

Head rugosely punctate and somewhat striolate, the forehead unusually flattened, with a deep central furrow which does not ascend the vertex. *Rostrum* about as long as broad, slightly narrowed from the base to the middle, scrobiculate and shallowly impressed above, with a narrow deep furrow in the basal half, a fine juxta-marginal carina running from the apex to just above the eye, and a shorter lateral carina meeting the anterior margin of the eye. *Antennæ* red-brown, the funicle with the first joint evidently longer than the second. *Prothorax* longer than broad, its sides very strongly rounded, broadest before the middle, sharply constricted at the apex, its greatest width almost equal to the greatest width of the elytra, very convex above, finely and closely granulate and with a fine central stria which does not quite reach the apex. *Elytra* subtruncate at the base, not constricted laterally, but with the sides regularly rounded from the external angle, broadest about the middle, distinctly punctato-striate, the intervals broad, slightly convex and all equally raised, the setæ very short, dense and suberect. *Legs* red-brown, the front femora darker and wrinkled at the apex; the intermediate tibiæ with a short internal apical spine, the hind pair having the corbels clothed with long dense golden setæ inside and out.

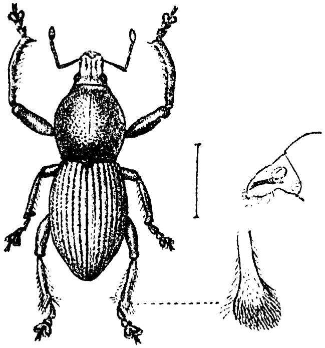

Fig. 52.—*Sympiezomias kraatzi*, Heller.

Length, 7 mm.; breadth, 3 mm.

Ceylon: Kandy and Paradna (*Dr. Walther Horn*); Jaffna (*E. E. Green*—Ind. Mus.).

Type ♂ in the Dresden Museum.

133. Sympiezomias metallescens, sp. nov.

Colour black, with grey scaling, the sides of the prothorax and elytra with a broad ill-defined stripe of metallic green, and a few scattered green scales on the disk of the elytra.

Head rugosely striolate, with a narrow central furrow. *Rostrum* longer than broad, its sides subparallel, not impressed above, longitudinally wrinkled and with a deep narrow furrow. *Prothorax* about as long as broad in the ♂, a little broader in the ♀,

the sides regularly rounded, broadest at the middle, the apex only slightly constricted and scarcely narrower than the base, evenly set with small granules having their apices bare and shiny, and with a narrow central furrow from base to apex. *Elytra* narrowly ovate in the ♂, broader in the ♀, without any humeral fold, shallowly compressed and subacuminate posteriorly, the apices jointly rounded in both sexes, deeply punctato-striate, the intervals convex and subcostate, the setæ short, sparse and suberect. *Legs* red-brown, with grey scaling having a coppery reflexion.

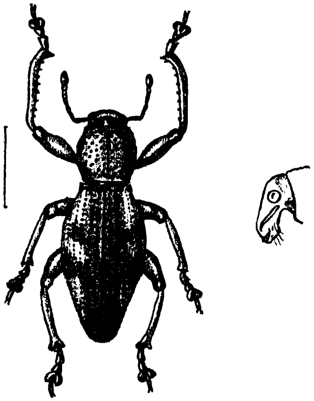
Fig. 53.—*Sympiezomias metallescens*, Mshl.

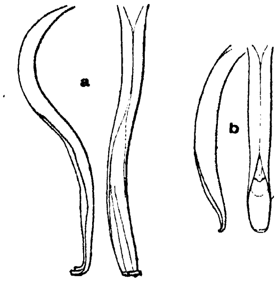

Fig. 54.—Male genitalia of (a) *Sympiezomias metallescens*, Mshl.; (b) *S. similis*, Mshl.

Length, ♂ 8–8½, ♀ 8–11¼ mm.; breadth, ♂ 3–3¼, ♀ 3½–5 mm.
BURMA: Ruby Mines (*Doherty*).
Types ♂ ♀ in the British Museum.

134. **Sympiezomias similis**, sp. nov.

Colour black, with grey scaling, the elytra having a faint transverse dark band behind the middle and sometimes a more indistinct dark patch before the middle, a small patch of metallic green scaling at the external angles of the base and a few scattered metallic scales along the sides.

Very similar in general appearance to *S. metallescens*, sp. n., and differing in the following characters:—*Rostrum* slightly narrowed from the base to the middle. *Prothorax* with the sides more strongly rounded, more closely granulate, the apices of the granules not shiny, the central furrow deep in the anterior half but more or less obsolete behind. *Elytra* shorter, broader and more convex, the sides more rounded and more rapidly acuminate behind. *Legs* black, with grey scaling having a slight coppery reflexion. The ♂ genitalia are extremely different in shape (*cf.* fig. 54).

Length, ♂ 7–8½, ♀ 7–8½ mm.; breadth, ♂ 3–3½, ♂ 3¼–3¾ mm.

ASSAM: Sylhet; Khasi Hills; Nemotha, Cachar (*J. Wood-Mason*—Ind. Mus.); Deju, N. Lakhimpur (*H. Stevens*).

Types ♂ ♀ in the British Museum.

Genus **LEPTOMIAS.**

Leptomias, Faust, Stettin. Ent. Zeit. 1866, p. 132.
Heteromias, Faust, Deut. Ent. Zeit. 1897, p. 344 (n. syn.).—Type, *Piazomias schönherri*, Fst.
Parisomias, Faust, l. c. (n. syn.).—Type, *P. costatus*, Fst.
Piazomias (part), Lacordaire, Gen. Col. vi, 1863, p. 90.

TYPE, *Pachynotus angustatus*, Redt.

Head with the eyes lateral, broadly ovate and moderately prominent, the forehead as broad as the base of the rostrum. *Rostrum* longer than the head and continuous with it, with a very small apical emargination, without distinct carinæ above and without a lateral impression in front of the eye; the scrobes generally deep and sublinear throughout, but occasionally shallower and broader behind (*L. angustatus*, *L. invidus*); the mandibular scar projecting. *Antennæ* with the scape cylindrical, clavate, slightly curved and of variable length; the funicle with joint 1 much longer than 2 (except in *L. longulus*, Fst., and *L. curvipes*, Mshl.), 3–6 subequal and bead-like, 7 longer and subconical; the club elongate, sharply acuminate, 4-jointed. *Prothorax* truncate at base and apex, the sides rounded, the base narrowly marginate, the coxæ very near the gular margin, which is shallowly sinuate. *Scutellum* very small or invisible. *Elytra* marginate at the base, the edge being nearly always elevated, without true shoulders, the lateral margin scarcely sinuate. *Sternum* with the mesosternal epimera much smaller than their episterna and not separating them from the base of the elytra; the metasternum generally as long as the median coxæ, rarely shorter (*L. bipustulatus*, *L. stultus*), the episterna distinct, but scarcely dilated at the anterior end, the episternal suture complete, the hind coxæ almost touching the elytra. *Venter* with the intercoxal process rounded or subangulate, segment 2 as long as 3+4 and separated from 1 by a curved suture of even depth. *Legs* with the femora clavate, the anterior pair being rather thicker; the tibiæ without a distinct apical spine, the front pair curved, denticulate along the inner edge in both sexes and produced internally at the apex, the hind pair almost straight, minutely serrate internally in the ♂ (except *L. waltoni*), the posterior corbels triangular, narrowly enclosed and slightly ascending the dorsal edge; tarsi with joint 3 broadly lobate, the claws connate at the base.

Range. The mountain regions of Northern India and Tibet.

This is one of the many subdivisions of the genus *Piazomias*, Schönh., suggested by Faust, and there are two characters by which the latter genus, as restricted by him, may be distinguished from

Leptomias, as here defined: (1) the metasternum is fused with its episterna, so that the suture has disappeared except close to the hind coxæ; (2) the corbels of the hind tibiæ are entirely open.

The distinctions given by Faust for his genus *Heteromias* are that the scrobe is not dilated behind, and that the metasternum is shorter than the median coxæ. But these characters occur independently in various species which he himself referred to *Leptomias*, and the genus therefore cannot be retained. For similar reasons I am unable to recognise the genus *Parisomias*, Fst. It may be noted that the generic name *Heteromias* was originally used without description and even without any mention that it was considered to be a new genus (Stettin. Ent. Zeit. 1888, p. 285).

Key to the Species.

1 (48) Joint 1 of the funicle longer than 2; middle coxæ of ♂ simple.
2 (23) Scape reaching posterior margin of eye.
3 (4) Elytra with a long spine-like process projecting horizontally from the suture at the top of the declivity .. *spinifer*, sp. n., ♀, [p. 176.
4 (3) Elytra without any such process.
5 (12) Alternate intervals of elytra more raised.
6 (7) Alternate intervals of elytra strongly raised, 3 and 5 terminating abruptly at the top of the declivity and thus forming a tubercular prominence .. *costatus*, Fst., ♂, [p. 176.
7 (6) Alternate intervals slightly raised, 3 and 5 continuing uniformly to the apex.
8 (9) Forehead and base of rostrum with a broad continuous impression; prothorax without a distinct central furrow .... *setulosus*, sp. n., ♂, [p. 177.
9 (8) Forehead and base of rostrum not continuously impressed; prothorax with a deep narrow furrow.
10 (11) Rostrum scarcely longer than broad: pronotum coarsely punctate; hind tibiæ of ♂ simple .... *angustatus*, Redt., ♂ ♀, [p. 177.
11 (10) Rostrum evidently longer than broad; pronotum rugosely granulate; hind tibiæ of ♂ bent inwards at the apex. *lituratus*, Redt., ♂, [p. 179.
12 (5) Alternate intervals of elytra not more raised.
13 (14) Interval 3 of the elytra with a rounded tubercle at the top of the declivity.. *bituberculatus*, ♀, sp. n., [p. 179.
14 (13) Interval 3 without any tubercle.
15 (20) Pronotum with coarse confluent punctures throughout.
16 (19) Base of rostrum with a distinct short longitudinal impression on each side of the central furrow; upper margin

of the scrobe almost touching the lower edge of the eye.

17 (18) Head punctate and with a narrow central furrow; rostrum evidently narrowed from base to middle .... *curtus*, sp. n., ♂ ♀, [p. 180.

18 (17) Head striolate, without a central furrow; rostrum almost parallel-sided *porcellus*, sp. n., ♂, [p. 180.

19 (16) Rostrum without longitudinal impressions at the base; scrobe bent downwards at some distance in front of the eye .... *scrobicollis*, sp. n., ♂, [p. 181.

20 (15) Pronotum finely granulate, the granules much coarser at the sides.

21 (22) Funicle with joints 3 and 4 equal; hind tibiæ with the external apical angle not produced .... *elongatulus*, sp. n., ♂, [p. 181.

22 (21) Funicle with joint 3 longer than 4; hind tibiæ with the external angle distinctly produced .... *jekeli*, Fst., ♀, p. 181.

23 (2) Scape not reaching posterior margin of eye.

24 (47) Front tibiæ strongly denticulate internally in both sexes.

25 (28) Rostrum striolate at base and with a broad transverse basal impression; pronotum with no trace of a central stria.

26 (27) Pronotum finely shagreened on the disk and a little rugose laterally, broadest about the middle, the apex not much narrower than the base; elytra with the two juxta-sutural striæ curving outwards at the base.............. *stoliczkæ*, Fst., ♂ ♀, [p. 182.

27 (26) Pronotum granulate throughout, broadest behind the middle, the apex much narrower than the base; the juxta-sutural striæ not curving outwards at the base .... *verrucicollis*, Fst., ♀, [p. 183.

28 (25) Rostrum not striolate nor transversely impressed at the base; pronotum with a central stria or at least traces of one.

29 (39) Pronotum smooth and very finely shagreened in the centre.

30 (35) Funicle with joint 3 equal to 4 and much shorter than 2.

31 (32) Anterior margin of pronotum slightly produced in the middle; striæ on elytra shallow, the intervals almost plane; male organ very strongly curved, terminating in a long flat spatula and truncate at the apex .. *bipustulatus*, Fst., ♂ ♀, [p. 184.

32 (31) Anterior margin of pronotum quite straight; striæ deeper, the intervals more convex; male organ not spatulate at the apex.

33 (34) Tarsi with joint 2 evidently longer

than broad; basal angles of elytra not projecting laterally beyond those of the prothorax; male organ only slightly curved and with no dorsal furrow, the apex ending in a sharp point bent abruptly downwards .... *stultus*, Fst., ♂, p. 184.

34 (33) Tarsi with joint 2 not longer than broad, forming almost an equilateral triangle; basal angles of elytra projecting laterally beyond those of the prothorax; male organ rather strongly curved throughout and with a shallow dorsal furrow .... *invidus*, Fst., ♂, [p. 185.

35 (30) Funicle with joint 3 a little longer than 4 and only slightly shorter than 2; pronotum with a distinct complete central stria.

36 (37) Rostrum dilated at the apex; prothorax much narrower than the broadest part of the elytra; base of elytra but slightly marginate ...... *prætermissus*, sp. n., ♂, [p. 186.

37 (36) Rostrum parallel-sided; prothorax only slightly narrower than the broadest part of the elytra; base of elytra distinctly marginate.............. *cylindricus*, sp. n., ♂, [p. 186.

38 (29) Pronotum more or less granulate, punctate or rugose in the centre.

39 (46) Basal angles of elytra not projecting.

40 (41) Funicle with joint 3 elongate, evidently longer than 4 and scarcely shorter than 2; frontal stria not continued beyond hind margin of eye; male organ with the tip curved upwards.. *sabulosus*, Fst., ♂, [p. 186.

41 (40) Funicle with joint 3 about equal to 4 and evidently shorter than 2; frontal furrow continued to the vertex of the head.

42 (45) Elytra with stria 9 not impressed; prothorax broadest at the middle and with the apex not much narrower than the base.

43 (44) Funicle with joint 7 as long as broad; pronotum coarsely scrobiculate; elytra narrowly marginate at the base; male organ with the tip curved downwards .... *sulcicollis*, sp. n., ♂ ♀, [p. 187.

44 (43) Funicle with joint 7 transverse; pronotum rugosely granulate; basal margin of elytra not elevated; male organ with the tip curved upwards .. *persimilis*, sp. n., ♂, [p. 187.

45 (42) Elytra with stria 9 broadly impressed; prothorax broadest behind the middle, the apex much narrower than the base.................... *bimaculatus*, Fst., ♀, [p. 188.

46 (39) Elytra constricted laterally at the base, so that the basal angles project; funicle with joint 3 much

shorter than 2; the frontal stria not reaching the hind margin of the eye *audax*, Fst., ♂ ♀, [p. 188.

47 (24) Front tibiæ not denticulate internally in either sex................ *waltoni*, sp. n., ♂ ♀, [p. 189.

48 (1) Joint 1 of funicle not longer than 2; middle coxæ of ♂ with a small tubercular projection.

49 (50) Prothorax with the sides only gently rounded, without pale stripes above; corbels of hind tibiæ with a tuft of unusually long setæ on the inner edge (fig. 59)................... *longulus*, Fst., ♂, [p. 189.

50 (49) Prothorax with the sides very strongly rounded and with a narrow stripe of pale scales on each side; corbels of hind tibiæ with a few setæ of normal length......................... *curvipes*, sp. n., ♂, [p. 190.

135. **Leptomias spinifer**, sp. nov.

Colour black, with uniform dense sandy-grey scaling.

Head with close shallow punctation, the forehead convex and with a very fine central stria ascending the vertex. *Rostrum* rather longer than broad, a little wider at the apex, with a faint transverse impression across the base, a deep central furrow and two lateral carinæ enclosing a longitudinal impression, the inner carina trending inwards from the apex, then curving outwards to the eye. *Antennæ* red-brown, the two basal joints of the funicle equal. *Prothorax* as long as broad, subcylindrical, its sides very slightly rounded, broadest behind the middle, fairly closely set with low setiferous granules and with a shallow complete central furrow. *Elytra* very shallowly sinuate at the base, the sides slightly rounded, distinctly punctato-striate, the intervals broad, smooth and rather convex, 3, 5 and 7 being somewhat more raised than the others, and the sutural intervals are jointly produced at the top of the declivity into a long spine-like process projecting horizontally backwards; the setæ short, sparse and suberect. *Legs* long and slender, the posterior pairs of tibiæ without an apical spine.

Length (without spine), 9½ mm.; breadth, 4 mm.

Kashmir: Sonamarg, 8600 ft. (*T. R. D. Bell*).

Type ♀ in Coll. H. E. Andrewes.

136. **Leptomias costatus**, *Fst.*

Parisomias costatus, Faust,* Deut. Ent. Zeit. 1897, p. 345.

Colour black, with dense grey and blackish scaling.

Head finely aciculate, the forehead convex and with a deep narrow furrow ascending to the vertex. *Rostrum* scarcely longer than broad, wider at the apex, shallowly impressed above, with a broad central furrow and a fine carina on each side of it, which converge slightly towards the base. *Antennæ* black, the funicle with joint 1 evidently longer than 2. *Prothorax* a little broader than long, its sides rounded, broadest behind the middle, the apex narrower than the base, covered with depressed granules, which are more sparse and less distinct on the disk than at the sides, the central furrow complete, broad and shallow, but deeper towards the apex and the base. *Elytra* ovate, jointly sinuate at the base, the sides slightly rounded, pointed and subcompressed behind, shallowly punctato-striate, the punctures indistinct, the intervals 3, 5, 7 and 9 more raised than the others and costate, 5 terminating abruptly at the top of the declivity in a rounded tubercle, the others continued to the apex but with a slight tubercular elevation on 3 just before the declivity, the suture only slightly raised in the basal two-thirds, but strongly elevated on the declivity; the raised intervals with rows of short setæ which are depressed on the anterior parts, but erect on the declivity. *Legs* rather slender, the posterior pairs of tibiæ with a very short apical spine.

Length, 7 mm.; breadth, 3¼ mm.

PUNJAB: Dalhousie.

Type ♂ in the Dresden Museum.

137. **Leptomias setulosus**, sp. nov.

Colour black, with dense earthy-brown scaling, with here and there a slight coppery reflexion.

Head striolate, the forehead shallowly impressed and with a very fine central stria ascending the vertex. *Rostrum* longer than broad, a little wider at the apex, with a broad and deep longitudinal impression above and a narrow central furrow, the dorsal edges angulated, but without a distinct carina. *Antennæ* dark brown, the funicle with joint 1 longer than 2. *Prothorax* as long as broad, its sides rounded, broadest behind the middle, finely scrobiculate and rather sparsely set with small depressed granules, the central furrow evanescent, very faint and shallow, the setæ short, dense and erect. *Elytra* with the basal margin jointly truncate, obliquely rounded from the base, then almost parallel-sided to beyond the middle, punctato-striate, the punctures indistinct, the intervals smooth and convex, 3, 5 and 7 more raised than the others and without tubercular elevations, the suture slightly elevated on the declivity, the setæ erect and rather sparse. *Legs* with the femora comparatively stout, the posterior pairs of tibiæ without an apical spine.

Length, 6 mm.; breadth, 2¼ mm.

KASHMIR: Sonamarg, 8600 ft. (*T. R. D. Bell*).

Type ♂ in Coll. H. E. Andrewes.

138. **Leptomias angustatus**, *Redt.*

Pachynotus angustatus, Redtenbacher,* Hügel's Kaschm. iv, pt. 2, 1848, p. 542.

Cneorhinus pictus, Redtenbacher,* l. c. p. 543, pl. 26, f. 2 (n. syn.).

Colour black, with brownish scaling and some darker patches on the elytra in the ♂; in the ♀ the prothorax has a very broad denuded dorsal stripe, the sides being brown with a paler dorsal edging, the elytra brown, with an ill-defined variable pale patch at the base of intervals 4–6, and a similar patch on the same intervals behind the middle.

Head finely and shallowly punctate, the forehead with a narrow furrow scarcely ascending the vertex. *Rostrum* scarcely longer than broad, its sides subparallel, plane above, with a deep central furrow and a rather deep longitudinal impression on each side of it, and no lateral carinæ. *Antennæ* red-brown, the funicle with joint 1 longer than 2. *Prothorax* as long as broad in ♂, slightly broader in ♀, the sides rounded, broadest about the middle, the apex not much narrower than the base, with large coarse punctures on the disk, the punctures interspersed with granules laterally, the central furrow narrow, deep and complete. *Elytra* subtruncate at the base, narrowly elongate in the ♂, much broader in the ♀, the sides slightly rounded, with a shallow basal constriction, the striæ distinctly punctate, the intervals rather narrow, the alternate ones more raised, the suture more elevated on the declivity, the setæ short and suberect. *Legs* black, the tarsi reddish, the posterior tibiæ of the ♂ simple.

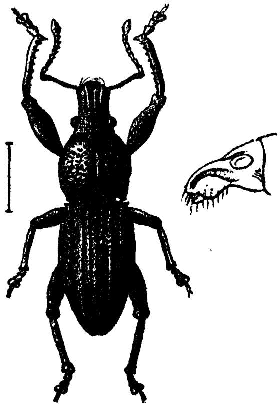

Fig. 55.—*Leptomias angustatus*, Redt., ♂.

Length, ♂ 6½–7¼, ♀ 6½–8½ mm.; breadth, ♂ 2½–2¾, ♀ 3–4 mm.

Kashmir (*von Hügel*—type). United Provinces: Mussoorie, 7000 ft. (*Lefroy*—Pusa Coll.).

Type ♂ in the Vienna Museum; also the type of *C. pictus*.

I can have no hesitation in treating *C. pictus* as the ♀ of *L. angustatus*, for, apart from the colouring, their only differences are obviously of a sexual character, and they have been taken in the same locality.

139. **Leptomias lituratus**, *Redt.*

Cneorhinus lituratus, Redtenbacher,* Hügel's Kaschm. iv, pt. 2, 1848, p. 543.

Colour black, with brown scaling having a slight coppery reflexion, and with a faint paler patch with a darker edging on each elytron behind the middle.

Head finely punctate, the forehead somewhat wrinkled and with a deep central stria which ascends right to the vertex. *Rostrum* evidently longer than broad, almost parallel-sided, rugosely punctate above, with a deep central furrow and a broad longitudinal impression on each side of the basal half. *Antennæ* red-brown (both funicles missing). *Prothorax* as long as broad, the sides regularly rounded, broadest about the middle, the apex a little narrower than the base, rugosely granulate above and with a deep complete central furrow. *Elytra* narrowly ovate, strongly emarginate at the base, the striæ with rather large but shallow punctures, the intervals somewhat narrow and convex, the alternate ones a little more raised, the suture obtusely elevated on the declivity, the setæ short and suberect, longer and more numerous behind. *Legs* black, the tarsi reddish; the posterior tibiæ of the ♂ quite straight except at the apex, where they are bent sharply inwards almost at right angles.

Length, 6½ mm.; breadth, 2½ mm.

KASHMIR (*von Hügel*—type). UNITED PROVINCES: Mussoorie; Mandali, 9000 ft., Jaunsar division, Dehra Dun.

Type ♂ in the Vienna Museum.

140. **Leptomias bituberculatus**, sp. nov.

Colour black, with uniform brownish scaling.

Head striolately punctured, with a deep narrow central furrow. *Rostrum* narrowed from the base to the middle, plane above, striolate, the central furrow not broader than that on the head and almost reaching the apex. *Antennæ* red-brown, with the scape reaching the posterior margin of the eye, the funicle with joints 3 and 4 equal. *Prothorax* a little longer than broad, the sides rounded, broadest behind the middle, the apex narrower than the base, deeply and closely punctate throughout, with a deep narrow central furrow and a shallow rounded lateral impression behind the middle. *Elytra* broadly ovate, sharply acuminate behind, with the apex produced downwards, the base obscurely marginate, deeply punctato-striate, the intervals slightly convex, 3 and 5 broader than 2 and 4, with a prominent rounded tubercle at the top of the declivity, the setæ rather dense, short and suberect.

Length, 5½ mm.; breadth, 2½ mm.

N. INDIA.

Type ♀ in the British Museum.

141. Leptomias curtus, sp. nov.

Colour black, with uniform dark grey scaling.

Head convex, closely punctate, the forehead with a narrow furrow as broad as that on the rostrum. *Rostrum* shallowly depressed near the base and with confluent punctation, narrowed from the base to the middle, with a narrow central furrow in the basal half only and a stout longitudinal impression on each side of it. *Antennæ* light chestnut, the scape reaching the posterior margin of the eye, joints 3 and 4 of the funicle equal. *Prothorax* a little broader than long, the sides strongly rounded, broadest at the middle, the apical margin slightly rounded dorsally and scarcely narrower than the base, deeply and rugosely punctured throughout and with a well-marknd central furrow. *Elytra* very broadly ovate in the ♀, much narrower in the ♂, the basal margination slight, with deeply punctured striæ which are a good deal obscured by the scaling, the intervals rather convex, narrower than the striæ in the ♂, but not in the ♀, the setæ dense, short and erect.

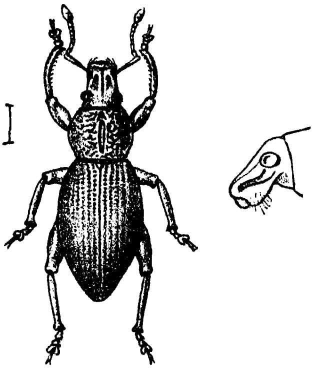

Fig. 56.—*Leptomias curtus*, Mshl., ♀.

Length, ♂ 3½, ♀ 4¾ mm.; breadth, ♂ 1½, ♀ 2¾ mm.

UNITED PROVINCES: Dehra Dun (*G. Rogers*).

Types ♂ ♀ in the British Museum.

142. Leptomias porcellus, sp. nov.

Colour black, with thin dark brown scaling.

Head striolate, without any central furrow. *Rostrum* almost parallel-sided, striolate, shallowly depressed near the base, with a fine central furrow and a short longitudinal impression on each side of it in the basal half. *Antennæ* as in *L. curtus*. *Prothorax* slightly longer than broad, the sides gently rounded, broadest about the middle, the apical margin somewhat rounded dorsally and scarcely narrower than the base, with deep confluent punctation throughout and with a deep central furrow. *Elytra* very broadly ovate in the ♂, the basal margination slight, the striæ narrow and finely punctured, the intervals broad, almost plane and with dense short erect setæ.

Length, 3½ mm.; breadth, 2 mm.

BALUCHISTAN: Kaha Pass.

Type ♂ in the British Museum.

143. **Leptomias scrobicollis**, sp. nov.

Black, with uniform earth-brown scaling.

Head closely punctate, the forehead depressed and with a narrow central furrow as broad as that on the rostrum. *Rostrum* narrowed from the base to the middle, plane and rugulose above. *Antennæ* chestnut, the scape reaching the posterior margin of the eye, joints 3 and 4 of the funicle equal. *Prothorax* about as broad as long, the sides rounded, broadest at the middle, the apical margin straight and scarcely narrower than the base, deeply and rugosely punctured throughout and with a deep narrow central furrow. *Elytra* oblong-ovate, the basal margination slight, the apex normal, deeply and broadly punctato-striate, the intervals not broader than the striæ and slightly convex, the setæ very short and suberect. *Legs* black, the femora rather stout, the posterior tibiæ serrate only near the apex.

Length, 4–4½ mm.; breadth, 2 mm.

KASHMIR (*T. R. D. Bell*).

Type ♂ in the British Museum.

144. **Leptomias elongatulus**, sp. nov.

Colour piceous, with brownish-grey scaling.

Head closely and shallowly punctate, with a fine central stria. *Rostrum* parallel-sided, plane above and with a deep narrow central furrow. *Antennæ* light chestnut, the scape reaching the posterior margin of the eye, joints 3 and 4 of the funicle equal. *Prothorax* as long as broad, the sides rounded, broadest rather behind the middle, the apex narrower than the base, very finely sculptured in the middle of the disk and more coarsely granulate at the sides, the central furrow narrow but distinct. *Elytra* narrowly elongate, the basal elevation slight, distinctly punctato-striate, the intervals narrow and convex, the setæ short, sparse and erect.

Length, 4–5 mm.; breadth, 1½–1¾ mm.

N. INDIA.

Type ♂ in the British Museum.

145. **Leptomias jekeli**, *Fst.*

Leptomias jekeli, Faust,* Stettin. Ent. Zeit. 1886, p. 135.

Colour black, with uniform sand-coloured scaling.

Head closely and shallowly punctate, the forehead with a fine central stria. *Rostrum* with its sides subparallel, faintly impressed above and with a deep central furrow. *Antennæ* light chestnut, the scape reaching the posterior margin of the eye, the funicle with joint 3 longer than 4. *Prothorax* rather broader than long, the sides rounded, broadest behind the middle, the apex narrower than the base, coarsely granulate at the sides, smoother in the middle of the disk, with a distinct narrow central furrow and a shallow rounded lateral impression behind the middle. *Elytra* broadly ovate, the basal margination faint, the apex produced downwards in a beak-like process in the ♀, deeply punctato-striate, the intervals broader than the striæ and distinctly convex, 3–5 being subcostate behind the middle, the setæ sparse and suberect.

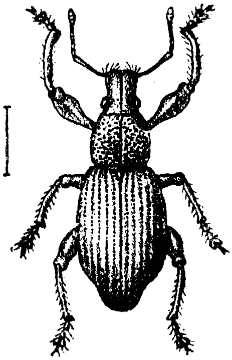

Fig. 57.—*Leptomias jekeli*, Fst., ♀.

Length, 6–7 mm.; breadth, 2¾–3½ mm.

PUNJAB: Murree (*Stoliczka*—type). UNITED PROVINCES: Almorah.

Type ♀ in the Dresden Museum.

In Faust's collection there are two specimens under this name labelled ♂ and ♀ respectively. I have selected the latter as his type, because the former is clearly not a ♂ but a ♀ of another species. It may prove to be the ♀ of one of the several species of which only the ♂ is known at present. The downward prolongation of the apex of the elytra is given by Faust as a distinctive feature of *L. jekeli*; but in my opinion this is a purely female character, and is to be found in several other species.

146. Leptomias stoliczkæ, *Fst.*

Leptomias stoliczkæ, Faust,* Stettin. Ent. Zeit. 1886, p. 137.

Colour black, with uniform brownish-grey scaling.

Head rather rugosely striolate, the forehead with a short central stria. *Rostrum* slightly widened towards the apex, rugulose above, with a broad impression on the basal half containing a short furrow. *Antennæ* blackish, the scape reaching the middle of the eye, the funicle with joints 3 and 4 equal. *Prothorax* a little broader than long, the sides moderately rounded, broadest about the middle, the apex not much narrower than the base, the apical margin straight dorsally, slightly oblique at the sides, the upper surface smooth and finely shagreened on the disk, a little more rugose at the sides and with no central stria. *Elytra* elongate, with the basal margin conspicuously raised and the external angles slightly prominent, transversely impressed close to the apex, so that the apex itself appears rather prominent, subdepressed above, with shallowly punctured striæ, the two nearest the suture curving a little outwards at the base, the intervals a little broader than the striæ and rather convex. *Legs* with the posterior tibiæ very minutely denticulate internally.

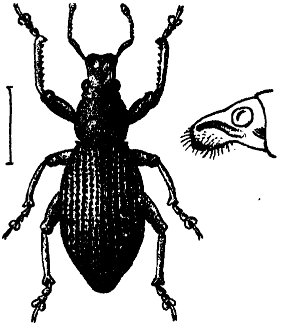

Fig. 58.—*Leptomias stoliczkæ*, Fst., ♀.

Length, ♂ 7¼–8, ♀ 7½–9 mm.: breadth, ♂ 2¾–2⅞, ♀ 3½–4¼ mm.

Kashmir (*Stoliczka*, *T. R. D. Bell*). Punjab: Murree (*Stoliczka*—Ind. Mus.).

Type in the Dresden Museum.

147. **Leptomias verrucicollis**, *Fst.*

Leptomias verrucicollis, Faust,* Stettin. Ent. Zeit. 1886, p. 138.

Colour black, with uniform earth-brown scaling.

Head rather coarsely shagreened, the forehead faintly striolate and with a short central stria. *Rostrum* dilated at the apex, plane above in the anterior half, with a broad transverse impression near the base, and thence finely striolate, with a short central furrow and the dorsal margins rather sharply angulated. *Antennæ* red-brown, the scape reaching the middle of the eye, the funicle with joint 1 much longer than 2, 3 and 4 stout and equal. *Prothorax* transverse, the sides strongly rounded, broadest behind the middle, the apex much narrower than the base, the upper surface closely and evenly granulate throughout and without any central stria. *Elytra* broadly ovate, with the base narrowly marginate and broader than the base of the prothorax, but with the external angles not projecting, the punctures in the striæ shallow and scarcely visible through the scaling, the intervals broader than the striæ and slightly convex, the setæ short and subdepressed on the disk, but suberect on the declivity.

Length, 6 mm.; breadth, 3 mm.

PUNJAB: Murree (*Stoliczka*).

Types, ♂ in the Dresden Museum, ♀ in the Indian Museum.

The above description refers to the ♀ only, the type of that sex being the only specimen I have seen.

148. **Leptomias bipustulatus**, *Fst.*

Leptomias bipustulatus, Faust,* Deut. Ent. Zeit. 1897, p. 342.

Colour black, with dark grey scaling, the prothorax with a broad lateral whitish stripe, and each elytron with an ill-defined blackish patch on the declivity.

Head with scattered shallow punctation, the forehead with a very fine central stria. *Rostrum* with its sides subparallel, almost plane and smooth above, with a narrow central furrow. *Antennæ* piceous, the scape reaching the middle of the eye, the funicle with joint 3 about equal to 4 and much shorter than 2. *Prothorax* a little broader than long, the sides strongly rounded, broadest behind the middle, the apex narrower than the base, the apical margin slightly produced in the middle dorsally and almost vertically truncate at the sides, the upper surface smooth and finely shagreened in the middle of the disk, granulate laterally, the central stria always faint and sometimes obsolete in the basal half. *Elytra* elongate in the ♂, ovate in the ♀, the elevation of the basal margin more distinct laterally, the external angles slightly prominent, convex above, with fine shallow but distinctly punctured striæ, the intervals broad and almost plane (especially in the ♀).

Length, ♂ 6¾, ♀ 6–6½ mm.; breadth, ♂ 2¾, ♀ 3–3¼ mm.

PUNJAB: Chamba, Dalhousie (*C. Somers Smith*). UNITED PROVINCES: Kului, Thano and Lachiwalla, Dehra Dun, girdling shoots of *Gardenia*; Almora, 5500 ft.; Kumaon (*C. Paiva*—Ind. Mus.).

Types ♂ ♀ in the Dresden Museum.

149. **Leptomias stultus**, *Fst.*

Leptomias stultus, Faust,* Deut. Ent. Zeit. 1897, p. 340.

Colour black, with grey scaling, or brownish-grey scaling with a coppery reflexion, the prothorax with a broad lateral pale stripe, the upper edge of which is concave.

Agrees with *L. invidus*, Fst., except in the following particulars:—*Head* more distinctly and dispersely punctate, the central stria finer and generally ascending to the vertex. *Prothorax* broadest at or a little behind the middle, in the former case with the apex about equal to the base, in the latter with the apex narrower, the upper surface often with a very faint, more or less abbreviated central stria. *Elytra* with the base slightly sinuate, less strongly marginate, not broader than the base of the prothorax and with its external angles not projecting, the posterior declivity much steeper and more abrupt, the striæ broader and more deeply punctate and the intervals narrower (but this is only apparent when the scaling is abraded). *Legs* with joint 2 of the tarsi evidently longer than broad.

Length, ♂ 7–8 mm.; breadth, $2\frac{1}{2}$–$3\frac{1}{4}$ mm.

PUNJAB: Chamba, Dalhousie (*Somers Smith*).

Types ♂ ♀ in the Dresden Museum.

I have seen 11 ♂ ♂ and only 1 ♀. It will be observed that there seem to be two different types of thorax in this species, but they merge into one another, and the individuals are quite similar in other respects, including the genitalia.

150. Leptomias invidus, *Fst.*

Leptomias invidus, Faust,* Stettin. Ent. Zeit. 1886, p. 136.

Colour black, the unique specimen much rubbed, but apparently with dense dark greyish scaling with a coppery reflexion, and the sides of the prothorax probably paler.

Head shallowly punctate, the forehead with a short deep stria not ascending the vertex. *Rostrum* parallel-sided, almost plane above, with a deep central stria, the dorsal edges rounded. *Antennæ* red-brown, the scape reaching the middle of the eye, the funicle with joint 3 short, equal to 4 and much shorter than 2. *Prothorax* a little broader than long, the sides strongly rounded, broadest slightly behind the middle, the apex distinctly narrower than the base, the upper surface finely shagreened in the middle of the disk and without a central stria, the sides granulate. *Elytra* ovate, with the base subtruncate and strongly marginate, broader than the base of the prothorax and with the external angles prominent, the slope of the posterior declivity more gradual than usual, the striæ rather deep and with broad punctures, the intervals convex and broader than the striæ, the setæ short, depressed on the disk and suberect behind. *Legs* with joint 2 of the tarsi not longer than broad, forming almost an equilateral triangle.

Length, $7\frac{1}{2}$ mm.; breadth, 3 mm.

KASHMIR: Sind Valley (*Stoliczka*).

Type ♂ in the Dresden Museum.

151. **Leptomias sabulosus**, *Fst.*

Leptomias sabulosus, Faust,* Deut. Ent. Zeit. 1897, p. 341.

Colour black, with brownish scaling, usually having a coppery reflexion, the sides of the prothorax indefinitely paler.

Head with the forehead flatter and the eyes less prominent than in *L. stultus*, Fst., otherwise similar. *Rostrum* parallel-sided, shallowly impressed near the apex, with a deep central stria in the basal two-thirds and a shallow impression on each side of it, the dorsal margins subangulated. *Antennæ* ferruginous, the scape slightly exceeding the middle of the eye, the funicle with joint 3 almost as long as 2 and evidently longer than 4, 7 rather longer than broad. *Prothorax* about as long as broad, much narrower than the widest part of the elytra, the sides strongly rounded, broadest rather behind the middle, the apex slightly narrower than the base, the upper surface rather rugosely granulate on the disk as well as the sides and with a distinct narrow central furrow. *Elytra* narrowly elongate, broadest at the middle, with the base shallowly sinuate and scarcely elevated, not broader than the base of the prothorax, the striæ broad and with large deep punctures, the intervals narrower and subcostate, the setæ short and suberect on the disk, longer and more erect behind.

Length, 6–6½ mm.; breadth, 2⅜–2½ mm.

PUNJAB: Chamba (*Somers Smith*).

Type ♂ in the Dresden Museum.

I have seen only ♂ specimens.

152. **Leptomias cylindricus**, sp. nov.

Colour black, with uniform greyish-brown scaling.

Closely allied to *L. sabulosus*, Fst., and differing as follows:—*Antennæ* with joint 3 of the funicle shorter than in *L. sabulosus*, but still longer than 4. *Prothorax* only slightly narrower than the broadest part of the elytra, the centre of the disk not granulate, but finely shagreened and with a fine central stria. *Elytra* more narrow and elongate, and with the sides less rounded, the base more distinctly marginate. *Legs* with joint 2 of the tarsi narrower and more elongate.

Length, 5¾–7 mm.; breadth, 2–2¼ mm.

PUNJAB: Dalhousie (*Somers Smith*). BALUCHISTAN: Kaha Pass (type).

Type ♂ in the British Museum.

153. **Leptomias prætermissus**, sp. nov.

Colour black, with greyish-brown scaling having a slight coppery reflexion.

A close ally of *L. sabulosus*, but offering the following distinctions:—*Rostrum* dilated towards the apex, the mandibular scars distinctly more prominent. *Antennæ* with joint 3 of the funicle shorter than 2, but longer than 4; colour piceous, with the basal half of the scape ferruginous. *Prothorax* a little broader than long, finely shagreened on the disk and with a fine central stria. *Elytra* proportionately wider, broadest behind the middle, the basal margin scarcely elevated.

Length, 6 mm.; breadth, 2⅝ mm.

PUNJAB: Chamba (*Somers Smith*).

Type ♂ in the British Museum.

This and the preceding species were confused by Faust with his *L. sabulosus*, but apart from the external distinctions detailed above they show appreciable differences from it and from each other in the shape of the male genitalia.

154. **Leptomias sulcicollis**, sp. nov.

Colour black, all the specimens with the scaling much abraded.

Head with fine shallow punctation and a deep central stria ascending to the vertex. *Rostrum* slightly longer than broad, almost plane above, with fine confluent punctation and a narrow central furrow, the dorsal margins rounded. *Antennæ* with the scape not reaching the posterior margin of the eye, the funicle with joint 2 shorter than usual, nearly half as long as 1, 3 short, equal to 4 and shorter than 2, 7 as long as broad. *Prothorax* about as long as broad, the sides moderately rounded, broadest about the middle, the apex narrower than the base, the upper surface coarsely scrobiculate and with a broad deep central furrow throughout. *Elytra* narrowly elongate in the ♂, a good deal broader in the ♀, the base narrowly marginate, the striæ rather deep and with shallow punctures, the intervals narrow and with short depressed setæ.

Length, 5-6¼ mm.; breadth, 2½-3 mm.

PUNJAB: Murree (*Somers Smith*—type). UNITED PROVINCES: Bhim Thal, 4500 ft., Kumaon (*Annandale*—Ind. Mus.).

Types, ♂ in the British Museum, ♀ in Coll. H. E. Andrewes.

155. **Leptomias persimilis**, sp. nov.

Colour black, scaling abraded.

Head with fine confluent punctation, the frontal stria ascending to the vertex. *Rostrum* a little longer than broad, quite plane above and with a narrow central stria, the dorsal margins subangulated. *Antennæ* with the scape not quite reaching the hind margin of the eye, the funicle with joint 3 about equal to 4 and evidently shorter than 2, 7 transverse. *Prothorax* as long as broad, the sides rounded, broadest at the middle, the apex slightly narrower than the base, the upper surface rugosely granulate and with a deep narrow central furrow. *Elytra* narrowly elongate (♂), truncate and with the basal margin not elevated, the striæ broad and with large punctures, the intervals narrow and with depressed short setæ.

Length, 5½ mm.; breadth, 2 mm.

N. INDIA.

Type ♂ in the British Museum.

156. **Leptomias bimaculatus**, *Fst.*

Leptomias bimaculatus, Faust,* Stettin. Ent. Zeit. 1886, p. 132.

Colour black, with dense light brown scaling, the elytra with a paler quadrate patch behind the middle on intervals 3–5.

Very similar in general appearance to *L. audax*, Fst., ♀, but differing in the following characters:—*Head* with a deep central stria ascending to the vertex. *Prothorax* more narrowed in front, broadest a little behind the middle, with low granules on the disk and with a deep narrow central furrow. *Elytra* with the basal margin scarcely raised, the external angles not projecting, the striæ deeper and with the punctation less distinct, stria 9 more broadly impressed than the others, the intervals more convex and with short erect setæ.

Length, 6–6¼ mm.; breadth, 3–3¼ mm.

PUNJAB: Murree (*Stoliczka*).

Type ♀ in the Dresden Museum.

157. **Leptomias audax**, *Fst.*

Leptomias audax, Faust,* Stettin. Ent. Zeit. 1886, p. 134.

Colour black, with dense brownish-grey scaling, the prothorax with a broad central darker stripe, the elytra with an ill-defined small paler patch at the base of interval 4 and a large subquadrate one behind the middle on intervals 3–5, the latter being bordered in front and behind by a vague darker marking.

Head finely shagreened, the forehead with a short central stria which does not ascend the vertex. *Rostrum* slightly longer than broad, its sides subparallel, almost plane above and with only a narrow central stria, the dorsal margins rounded. *Antennæ* with the scape not reaching the posterior margin of the eye, the funicle with joint 3 about as long as 4 and much shorter than 2, 7 subconical and about as long as broad. *Prothorax* slightly transverse, the sides strongly rounded, broadest at the middle, the apex a little narrower than the base, the upper surface with the sides closely granulate, the centre of the disk shallowly foveolate, with a narrow and abbreviated central stria in the ♀ and a broader longer furrow in the ♂. *Elytra* ovate in the ♂, broadly ovate in the ♀, the base sinuate and distinctly marginate, the basal angles projecting laterally, the punctures in the striæ showing distinctly through the scaling, the intervals much broader than the striæ, almost plane and with depressed short setæ. *Legs* with the hind tibiæ of the ♀ with small rather distinct granules, those of the

♂ closely serrate and with a rather deep sinuation on the lower edge near the apex; the second joint of the tarsi slightly longer than broad.

Length, 5½–6½ mm.; breadth, 2⅝–3⅜ mm.

PUNJAB: Jhilam Valley (*Stoliczka*).

Types, ♂ in the Dresden Museum, ♀ in the Indian Museum.

158. **Leptomias waltoni**, sp. nov.

Colour black, with mottled golden brown scaling.

Head very closely and evenly punctate throughout, the rostral furrow extending only to the anterior part of the forehead. *Rostrum* narrowed from the base to the middle, plane above, closely punctate and with some shallow longitudinal impressions; the mandibular appendages usually retained, being simple and only slightly curved, so that their apices do not meet when the mandibles are closed. *Antennæ* dark chestnut, the scape only just exceeding the anterior margin of the eye, joint 3 of the funicle slightly longer than 4. *Prothorax* broader than long, the sides rounded, broadest behind the middle, the apex evidently narrower than the base, very finely and closely punctate throughout, both on the disk and at the sides, the punctation hidden by the scaling, the central furrow very faint and often absent. *Elytra* broadly ovate in the ♀, a good deal narrower in the ♂, the basal margin strongly carinate, the apex normal, with deep narrow striæ containing shallow punctures, the intervals equally raised, broad and slightly convex. *Legs* black, with dense scaling, the front tibiæ without tubercles internally, the hind pair not serrate.

Length, ♂ 6–6½, ♀ 8–8½ mm.; breadth, ♂ 2¾–3, ♀ 3¾–4½ mm.

SIKKIM (*H. J. Walton*). TIBET: Gyangtse, 13,000 ft. (*H. J. Walton*).

Types ♂ ♀ in the British Museum.

159. **Leptomias longulus**, *Fst.*

Parisomias longulus, Faust,* Deut. Ent. Zeit. 1897, p. 345, note 3.

Colour black, the prothorax sparsely, the elytra densely covered with coppery brown scaling.

Head convex, shiny, with fine shallow punctation and a central stria which hardly reaches the vertex. *Rostrum* evidently longer than broad, its sides narrowed for a short distance from the base, the genæ slightly dilated, the upper surface shallowly impressed in the middle, with a broad deep central furrow and a fine longitudinal impressed line on each side, the dorsal margins subangulated. *Antennæ* red-brown, the apex of the scape blackish, the funicle with the two basal joints equal, 3–6 short and subequal. *Prothorax* longer than broad, the sides rounded, broadest at the middle, the apex evidently narrower than the base, the upper surface rather rugosely but shallowly punctate on the disk, with low granules laterally, the central furrow broad and deep. *Elytra* narrowly elongate, subelliptical, the base shallowly sinuate and marginate, the dorsal outline sinuate near the base, deepest behind the middle, the apices separately rounded, deeply punctato-striate, striæ 2 and 3 slightly curved near the base, the intervals rather broader than the striæ, subconvex and all about equally raised, the setæ rather shorter and sparser on the basal half, longer, denser and more erect behind. *Legs* black, with thin pale setæ; the outer edge of the front tibiæ distinctly curved near the apex, the hind tibiæ straight externally, but compressed in the apical half and not denticulate, the inner apical angle broadly and strongly produced and bearing a long tuft of fulvous setæ; front coxæ contiguous, intermediate coxæ of the ♂ with a small tubercular projection.

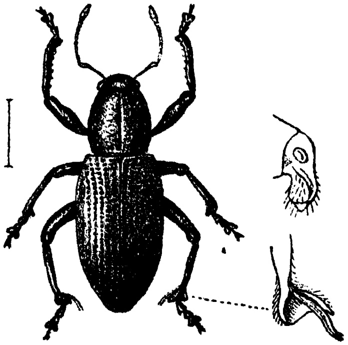

Fig. 59.—*Leptomias longulus*, Fst., ♂.

Length, 7½–8½ mm.; breadth, 2⅞–3 mm.

PUNJAB: Simla (*Hauser*—type). UNITED PROVINCES: Bagarkote, 8000 ft., Kumaon (*Tytler*—Ind. Mus.).

Types ♂ ♀ in the Dresden Museum.

The description was made from the ♂ type, and I have seen only one other specimen of the same sex.

160. **Leptomias curvipes**, sp. nov.

Colour black, the elytra with irregular patches of very small sparse grey scales; the pronotum with a narrow curved stripe on each side formed of similar scales.

Head with only a few scattered scales; the vertex coriaceous, the forehead shallowly punctate and wrinkled, with a distinct central furrow which becomes rather abruptly broader and deeper in front. *Rostrum* evidently longer than broad, narrowing for a very short distance at the base from the eye to the scrobe, thence very slightly and gradually widening to the apex; the upper surface almost flat, bare and shallowly and confluently punctate, with a narrow central furrow and a short lateral stria on each side, the dorsal edges rounded. *Antennæ* piceous, the funicle with the two basal joints equal, 3 and 4 equal and longer than broad, the others rather shorter. *Prothorax* globose, as long as broad, the sides very strongly rounded, broadest rather behind the middle, with a distinct constriction just before the base, which is markedly broader than the apex, the apical margin strongly oblique at the sides; the upper surface only slightly convex in the middle, coriaceous and shallowly punctate on the disk, with a well-marked and complete central furrow, the sides closely set with low granules. *Elytra* rather broadly ovate, broadest about the middle, the base rather deeply sinuate and narrowly marginate, the apices jointly rounded, the dorsal outline quite flat from the base to the top of the declivity; the upper surface with a very shallow and ill-defined depression on each elytron before the middle, strongly punctato-striate, the punctures slightly shallower behind, striæ 2 and 3 evidently curved outwards near the base, the intervals not broader than the striæ, equally raised and finely coriaceous; the scales very small, almost circular and not touching one another, the setæ very minute or absent on the disk, short and erect on the declivity. *Legs* with the femora coriaceous, the tibiæ more coarsely sculptured; the front femora more swollen and shiny; the front tibiæ only slightly curved externally, deeply bisinuate and coarsely dentate internally; the hind tibiæ distinctly curved externally, not compressed, but granulate internally, the corbel bent strongly inwards, its inner edge forming an obtuse angle with the tibiæ; the coxæ as in *L. longulus*, Fst.

Length, 8 mm.; breadth, 3½ mm.

UNITED PROVINCES: Bagarkote, 8000 ft., Kumaon (*Tytler*).

Type ♂ in the Indian Museum.

Genus XYLINOPHORUS.

Xylinophorus, Faust, Deut. Ent. Zeit. 1885, p. 177.

TYPE, *Xylinophorus prodromus*, Fst.

This genus is very closely allied to *Leptomias*, Fst., and I can find only two characters by which it may be distinguished:—(1) the elytra are not abruptly marginate at the base, but slope gradually forwards to their junction with the mesonotum; (2) the second ventral segment is much longer in the middle than the third and fourth together.

Faust founded the genus for those species referred to *Thylacites*, Schh., in which the tarsal claws are connate, but it also differs from that genus in having the corbels of the hind tibiæ bare of scaling.

Range. Northern India and Turkestan.

Key to the Species.

1 (6) Joint 1 of the funicle evidently longer than 2, the scape not reaching the posterior margin of the eye; elytra without prominences on the declivity.

2 (5) Head plane; prothorax coarsely granulate; apices of elytra without tufts of hairs.

3 (4) Prothorax broadest behind the middle, apex narrower than the base; elytra flattened on the disk; length 5½ mm. *peregrinus*, Fst., p. 192.

4 (3) Prothorax broadest at the middle, apex not narrower than the base; elytra convex; length 3 mm. . . . . *prodromus*, Fst., p. 192.

5 (2) Head convex; prothorax with very small close flattened granules, each covered by a single scale; elytra each with a short tuft of hairs at the apex. *penicillatus*, sp. n., p. 193.

6 (1) The two basal joints of the funicle equal, the scape reaching the posterior margin of the eye; elytra with low prominences at the top of the declivity on intervals 3 and 5 . . . . *strigifrons*, Fst., p. 194.

161. **Xylinophorus peregrinus**, *Fst.*

Xylinophorus peregrinus, Faust,* Deut. Ent. Zeit. 1897, p. 346.

Colour black, with dense blackish-brown scaling.

Head flattened, with close rugose granulation, the rostral furrow continued on to the anterior part of the forehead. *Rostrum* narrowed from the base to the middle, flattened above, rugulose and with a short deep furrow. *Prothorax* transverse, the apical margin oblique, truncate laterally, the sides strongly rounded, broadest behind the middle, the apex narrower than the base, with minute close granulation interspersed with larger subdepressed granules and short pale setæ. *Elytra* rather broadly ampliated at the base, the sides subparallel in the middle, the upper surface depressed, deeply punctato-striate, the punctures larger but partly hidden by the scaling, the intervals somewhat narrow and subcostate, with rows of short curved pale setæ.

Length, 5½ mm.; breadth, 3 mm.

PUNJAB: Dalhousie (*C. Somers Smith*).

Type in the Dresden Museum.

162. **Xylinophorus prodromus**, *Fst.*

Xylinophorus prodromus, Faust,* Deut. Ent. Zeit. 1885, p. 177.

Colour piceous, with grey scaling and vague brown markings.

Head finely rugose and flattened, the rostral furrow continued on to the anterior part of the forehead, which is slightly elevated above the eyes. *Rostrum* as in *peregrinus*, Fst., and with dense erect setæ. *Prothorax* transverse, the sides rounded, broadest at the middle, rather sharply constricted at both base and apex which are of about equal width, the anterior margin produced basally over the head so that it is very obliquely truncate when seen from the side; rugosely granulate above and without any central furrow. *Elytra* rather broadly ampliated at the base, the sides slightly rounded, convex above, shallowly punctato-striate, the intervals convex, even, and each with a row of short suberect setæ.

Length, 3 mm.; breadth, 1¾ mm.

KASHMIR: Sirikol (*Stoliczka*). TURKESTAN (type).

Type in the Dresden Museum.

163. **Xylinophorus penicillatus**, sp. nov.

Colour black, with greyish-brown scaling, the sides of the prothorax a little paler; the elytra with a narrow transverse dark band just before the middle between striæ 1 and 4, and a much broader one at the top of the declivity from the suture to stria 5; these markings may be partly or entirely obliterated.

Head convex, minutely granulate and striolate, but the structure concealed by the dense scaling, without any central stria. *Rostrum* a little longer than broad, almost parallel-sided, shallowly impressed above, with a very short narrow central furrow and with short fine erect setæ. *Antennæ* with the scape reaching to about the middle of the eye; the funicle with joint 1 much longer than 2, 3–6 a little longer than broad, 7 slightly broader and subquadrate. *Prothorax* about as long as broad, the sides moderately rounded, broadest at the middle, with a narrow transverse constriction at both the base and apex, the latter being slightly narrower; the upper surface smooth, with minute close flattened granules, each of which is covered by a single scale. *Elytra* comparatively elongate, less broadly ampliated at the base, the sides subparallel in the middle, subacuminate behind, the apices each with a short tuft of pale hairs, depressed above, finely

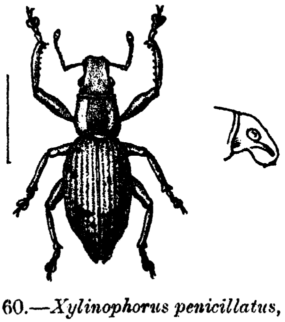

Fig. 60.—*Xylinophorus penicillatus*, Mshl.

punctato-striate, the intervals broad and almost plane on the disk, more convex laterally, densely squamose and with sparse short subdepressed white setæ.

Length, 6–9 mm.; breadth, 2¾–3½ mm.

UNITED PROVINCES: Mundali, Jaunsar (type); Pajidhar (*E. P. Stebbing*): Lachiwalla, Dehra Dun; Chabutlia, 6000 ft., Kumaon (*Dr. A. D. Imms*); Painsur, above Lohba, 8000 ft., Garhwal (*Tytler*—Ind. Mus.). PUNJAB: Kaleta, Simla dist. (*E. P. Stebbing*).

Type in the British Museum.

Mr. Stebbing found the species on blue pine (*Pinus excelsa*) at Pajidhar; while another specimen in the Dehra Dun collection is labelled "girdling shoots of *Gardenia*."

164. **Xylinophorus strigifrons**, *Fst.*

Xylinophorus strigifrons, Faust, Deut. Ent. Zeit. 1897, p. 347.

"The unique ♂ is smaller than the preceding species [*X. peregrinus*, Fst.] and differs from it in the striolation of the forehead and rostrum, its longer antennæ, its more finely sculptured thorax, and by the presence of two tubercular elevations on each elytron at the top of the declivity.

"The central furrow of the rostrum narrower and reaching the vertex of the head. The scape reaching the posterior margin of the eye, joints 1 and 2 of the funicle equal and each longer than 3 and 4 together, 4 somewhat shorter than 3 and scarcely longer than the remaining three joints. Thorax a little broader than long, the basal margin elevated, the granules finer, flatter and sparser than in *peregrinus*. Elytra very similar to those of the latter species, but proportionately narrower at the base, the punctures in the external striæ more evident, the intervals 2 and 4 [3 and 5] broader and slightly elevated, the latter gradually raised towards the apex, and each of them with a tubercular elevation at the beginning of the declivity, the longitudinal curvature flat, the declivity sloping steeply and directly to the apex. Anal segment with a large shallow depression. Legs scarcely differing from those of *peregrinus*.

"*Length*, 6 mm.; breadth, 2·8 mm."

UNITED PROVINCES: Dehra Dun.

Type in the Dresden Museum.

I have not seen this species, and the above is a translation of Faust's description.

Genus **HYPEROMIAS**, nov.

TYPE, *Hyperomias æneseens*, sp. nov.

Head with the eyes lateral, moderately prominent and almost circular; forehead as broad as the base of the rostrum. ***Rostrum*** deflected, longer than the head, parallel-sided, scarcely emarginate at the apex; the scrobes deep, rather widened behind and passing close to the lower margin of the eye. *Antennæ* short and stout, the scape rather strongly clavate and reaching the middle of the eye; the funicle with the two basal joints longer than the others and subequal, joints 3–7 transverse and subequal, the club ovate. *Prothorax* truncate at base and apex, the apical margin almost vertical laterally, the base with its margin slightly raised, the gular edge very shallowly sinuate and with the front coxæ placed very close to it. *Scutellum* very small, but distinct. *Elytra* truncate at the base, without true shoulders, the basal margin depressed, the apices jointly rounded, finely punctato-striate and with the lateral margins very shallowly sinuate. *Sternum* with the mesosternal epimera very small and not separating the base of the elytra from the episterna; metasternum hardly as long as the median coxæ, with its episterna fairly broad and the episternal suture distinct throughout, the posterior coxæ not reaching the elytra. *Venter* with the intercoxal process rounded and narrower than the coxæ, segment 2 as long as 3+4, and separated from 1 by a slightly curved suture. *Legs* rather short, the apex of the tibiæ of the hind pair scarcely reaching the apex of the elytra in the ♀, a little exceeding it in the ♂; the femora slightly thickened, the front pair not thicker than the others; the tibiæ more or less curved, not granulate internally, the front pair with no internal apical spine, the hind pair with the corbels open; the tarsi moderately broad, the claws connate at the base.

Range. Sikkim.

165. **Hyperomias ænescens**, sp. nov.

Colour bronze-black; the head and rostrum with dense greyish scaling; the prothorax with two broad dorsal grey or pale fawn stripes (sharply defined externally, but ill-defined internally), a narrow lateral stripe and a few pale scales in the central furrow; the elytra irregularly variegated with similar pale scaling.

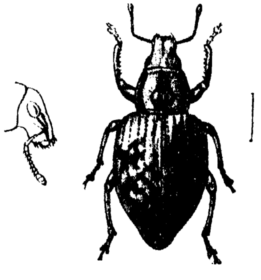

Fig. 61.—*Hyperomias ænescens*, Mshl., ♀.

Head convex, with scattered punctation and sometimes with a fine central stria on the forehead. *Rostrum* as long as broad, almost plane above, with distinct punctation and a deep central furrow in the basal half, the dorsal edge subangulate, and with a deep longitudinal impression above the scrobe in front of the eye. *Antennæ* piceous, with rather dense short pale setæ. *Prothorax* as long as broad in the ♂, transverse in the ♀, the sides rounded, the apex scarcely narrower than the base in the ♂, distinctly narrower in the ♀, the upper surface finely coriaceous, with a shallow central furrow and devoid of setæ. *Elytra* subelliptical in the ♂, broadly ovate and acuminate behind in the ♀, the striæ narrow and finely punctate, the intervals broad, almost plane and devoid of setæ, except for a few short ones near the apex; the inflex margins have a longitudinal impression and there is a distinct depression on the declivity in the ♀. *Legs* piceous, with pale setæ, the front tibiæ curved in both sexes, but more curved, slender and fringed with fine hairs in the ♂; all the tibiæ of the ♀ have on the inner edge a few spine-like bristles which are absent in the ♂.

Length, ♂ 4½, ♀ 5¾ mm.; breadth, ♂ 1⅞, ♀ 3 mm.

SIKKIM: Lachen Valley, 11,000 ft. (*Atkinson*).

Types ♂ ♀ in the British Museum.

Genus **GEOTRAGUS**.

Geotragus, Schönherr, Gen. Curc. viii, pt. 2, 1845, p. 411.
Taphrorhynchus, Schönherr, Mant. Sec. Curc. 1847, p. 33.—Type, *Brachyaspistes subfasciatus*, Desbr.
Piazomias (part), Lacordaire, Gen. Col. vi, 1863, p. 90.

TYPE, *Geotragus himalayanus*, Boh.

Head with the eyes lateral, ovate and rather prominent. *Rostrum* longer than the head and continuous with it, the base not or only slightly broader than the forehead, the apex scarcely emarginate; the scrobes deep, curving downwards at some distance in front of the eye, scarcely dilated behind and of equal depth throughout; mandibles with a very distinct scar, which is more or less prominent. *Antennæ* with the scape reaching the middle of the eye when at rest, slender at the base and gradually clavate; the funicle with the two basal joints more elongate, 3–6 subequal and bead-like, 7 longer and subconical, the club short, ovate and 4-jointed. *Prothorax* truncate at the base and apex, the sides rounded, the basal margin narrowly elevated, the apex with distinct curved vibrissæ below the eyes, the gular margin more or less sinuate. *Scutellum* invisible. *Elytra* ovate, truncate and elevated at the base, without any humeral callus, the lateral margin not or scarcely sinuate above the hind coxæ. *Sternum* with the front coxæ much nearer to the anterior margin of the prosternum; the mesosternum, with the epimera much smaller than the episterna; the metasternum hardly longer than the median coxæ, the episterna fusing with it behind and the suture therefore distinct only in the basal half, the hind coxæ just reaching the margin of the elytra. *Venter* with the intercoxal process narrower than the coxæ and rounded in front, segment 2 longer than 3+4 and separated from 1 by a curved suture. *Legs* elongate, the front pair rather longer, the femora thickened; the front tibiæ curved and strongly denticulate in both sexes, the hind pair with a slightly concave curve dorsally, their corbels large, evidently enclosed and slightly ascending the dorsal edge; the tarsi rather slender, joint 2 narrower than 1, 3 broadly lobate, the claws connate at the base.

Range. N. India, Burma, Siam, Malay Peninsula.

Key to the Species.

1 (6) Elytra with short depressed setæ; prothorax with at most a shallow central stria.
2 (5) Elytra with a prominent tubercle on interval 5 at the top of the declivity; the distal joints of the funicle longer than broad.
3 (4) Funicle with the two basal joints equal; prothorax as long as broad; elytra with an elongate elevation on interval 3 behind middle .... *himalayanus*, Boh., p. 197.
4 (3) Funicle with joint 1 a little longer than 2; prothorax somewhat longer than broad; elytra without an elevation on interval 3 .... *bituberosus*, Desbr., p. 198.
5 (2) Elytra without any tubercle on interval 5; the distal joints of the funicle broader than long .... *subfasciatus*, Desbr., p. 199.
6 (1) Elytra with long erect setæ; prothorax with a broad and deep central furrow.
7 (8) Funicle with the two basal joints subequal; ground-colour of femora black .... *fissicollis*, sp. n., p. 199.
8 (7) Funicle with joint 1 much longer than 2; ground-colour of femora red-brown, with the apices black ...... *ellipticus*, Fst., p. 200.

166. **Geotragus himalayanus**, *Boh.*

Geotragus himalayanus, Boheman,* Schönh. Gen. Curc. viii, pt. 2, 1845, p. 412.

Colour black, with earth-brown scaling, the elytra with some irregular darker markings.

Head with fine confluent punctation, the forehead striolate and with a fine central stria ascending the vertex. *Rostrum* longer than broad, parallel-sided, striolate above, broadly impressed in the basal half, with a narrow central furrow and without any ante-ocular impression. *Antennæ* red-brown, the funicle with the two basal joints of about equal length and thickness. *Prothorax* as long as broad, its sides evenly rounded, broadest about the middle, the apex very little narrower than the base, rugosely granulate, with a narrow central stria, which is more distinct in the basal half, and a shallow transverse impression near the apex. *Elytra* with the sides rounded, broadest about the middle, sharply narrowed before the apex, deeply striate, the striæ with large deep punctures, the intervals rather convex, the discal ones often with numerous transverse interruptions giving them a tuberculate appearance, 3 and 5 slightly more raised, the former with a low oblong tubercle behind the middle, the latter with a still larger tubercle at the top of the declivity; the setæ sparse, short and curved. *Legs* long and slender.

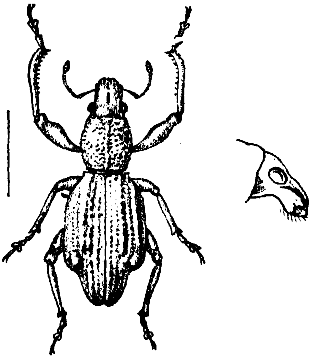

Fig. 62.—*Geotragus himalayanus*, Boh.

Length, ♂ 6¾–7½, ♀ 8¼–9½ mm.: breadth, ♂ 2¾–3, ♀ 3½–4 mm.

SIKKIM: Mungphu (*E. T. Atkinson*); Lebong, 5000 ft. (*H. M. Lefroy*—Pusa Coll.); Darjiling, 7000–8000 ft. (*R. B. Horsfall*—Ind. Mus.); Gopaldhara, Rangbong Valley, Darjiling (*W. K. Webb*).

Type ♀ in the Stockholm Museum.

167. **Geotragus bituberosus**, *Desbr.*

Brachyaspistes bituberosus, Desbrochers des Loges,* C. R. Soc. Ent. Belg. 1891, p. cccliv.

Very closely allied to *G. himalayanus*, but differing from it in the following particulars :—

Antennæ with joint 1 of the funicle appreciably longer than joint 2. *Prothorax* a little longer than broad, the granules more sparse on the disk and generally more flattened. *Elytra* with the intervals less uneven, the posterior prominence on interval 5 more ridge-like than tuberculate, interval 3 without any distinct postmedian elevation. *Genitalia* with the terminal process longer and much more strongly reflexed at the tip.

Length, ♂ 8–10, ♀ 8½–12 mm.; breadth, ♂ 2¾–3½, ♀ 3½–4¾ mm.

BENGAL: Tetara and Barwa, Chota Nagpur (*Father Cardon*—type). SIKKIM: Kurseong, 6100 ft. (*E. A. D'Abreu*). BHUTAN (*Capt. Pemberton*). ASSAM: Dumpep, 4500 ft., and The Peak, 6400 ft., Shillong (*S. W. Kemp*—Ind. Mus.).

Type in the Brussels Museum.

In the typical form from the plains the apices of the elytra in the ♂ are obtuse, as in *G. himalayanus*, whereas in the specimens from the hills they are more produced and acute, this being most marked in those from Bhutan.

168. **Geotragus subfasciatus**, *Desbr.*

Brachyaspistes subfasciatus, Desbrochers des Loges,* Journ. As. Soc. Bengal, 1890, p. 211.

Taphrorhynchus assamensis, Faust, Stett. Ent. Zeit. 1891, p. 260, & 1893, p. 149.

Colour black, with earthy-brown scaling, the prothorax with a lanceolate darker dorsal stripe, the elytra with an ill-defined darker patch beyond the middle.

Head closely striolate, the forehead sometimes with a fine median stria ascending the vertex. *Rostrum* longer than broad, dilated at the apex, with a large deep median fovea above, the basal portion striolate and with a narrow central furrow, the apical part with two deep convergent sulci, the ante-ocular area with a longitudinal impression. *Antennæ* dark brown, the funicle with joint 1 equal to, but thicker than, 2. *Prothorax* as long as broad, its sides regularly rounded, broadest about the middle, the apex but little narrower than the base, closely and evenly covered with small granules and with a complete shallow central furrow. *Elytra* ovate, of the same shape as in *G. himalayanus* but more abruptly constricted at the base, the intervals smooth, slightly convex, the alternate ones not more raised and without tubercles, the suture slightly elevated on the declivity, the setæ short and subdepressed. *Legs* stouter than in *G. himalayanus*.

Length, ♂ 8¼–9¾, ♀ 8½–11 mm.; breadth, ♂ 3¼–4, ♀ 3¾–5 mm.

BHUTAN: Pedong, Maria Basti. SIKKIM: Ghumti, 4000 ft., Darjiling dist. (*F. H. Gravely*—Ind. Mus.); Mungphu (*E. T. Atkinson*). BENGAL: Tetara, Chota Nagpur (*Cardon*).

Type in the Indian Museum; of *assamensis* at Dresden.

169. **Geotragus fissicollis**, sp. nov.

Colour black, with brownish-grey scaling, the elytra with a broad transverse dark brown band behind the middle.

Head rugosely punctate and wrinkled, the forehead with a deep central furrow. *Rostrum* rather longer than broad, narrowed from the base to the middle, then parallel to the apex, broadly and deeply impressed above, with a deep furrow in the impression, also with a broad lateral furrow on each side and a longitudinal impression in front of the eye. *Antennæ* with the two basal joints of the funicle about equal. *Prothorax* as long as broad, the sides regularly rounded, constricted at base and apex, broadest before the middle, the apex scarcely narrower than the base, fairly closely covered with small granules, with a very deep and broad central furrow, which does not reach the apex. *Elytra* ovate, broadest about the middle, subcompressed near the apex, the actual apex produced downwards in both sexes, but much more strongly so in the ♀, deeply punctato-sulcate, the intervals rather narrow, subcostate and without any tubercles, the setæ long, stout and erect. *Legs* with the ground-colour entirely black.

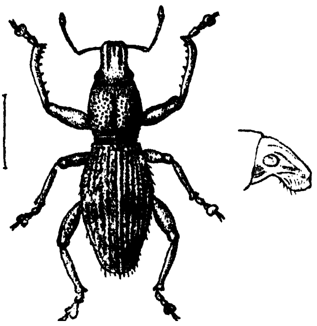

Fig. 63.—*Geotragus fissicollis*, Mshl.

Length, 7½–10½ mm.; breadth, 3–5 mm.

BURMA: Tavoy (*Doherty*).

Types ♂ ♀ in the British Museum.

170. **Geotragus ellipticus**, *Fst.*

Sympiezomias ellipticus, Faust,* Ann. Mus. Civ. Genova, xxxiv, 1894, p. 172 (1895).

Colour black, with uniform brownish-grey scaling above and a few yellow or metallic scales along the sides.

Closely allied to *G. fissicollis*, Mshl., and agreeing with it except in the following points:—*Antennæ* with joint 1 of the funicle much longer than 2. *Prothorax* slightly broader than long, its sides more strongly rounded, broadest at or behind the middle. *Elytra* much less narrowed at the base, broadest rather before the middle, scarcely compressed behind, the apex not produced downwards in the ♂ and only slightly so in the ♀, the striæ narrower, the punctures shallower and scarcely visible through the scaling except at the extreme base, the intervals rather broader. *Legs* with the ground-colour of the femora red-brown, their apices and the tibiæ black.

Length, 5¾–10¾ mm.; breadth, 2⅜–5 mm.

BURMA: Karen Hills, 3000 ft. (*Fea*, *Doherty*); Tandong, 4000 ft., Tenasserim (*Fruhstorfer*).

Types ♂ ♀ in the Genoa Museum.

Genus PACHYNOTUS.

Pachynotus, Redtenbacher, Hügel's Kaschm. iv, 2, 1848, p. 541.
Piazomias (part), Lacordaire, Gen. Col. vi, 1863, p. 90.

TYPE, *Pachynotus globulicollis*, Redt.

Agrees with the description of *Geotragus*, Schh., except in the following respects:—

Rostrum with the base never narrower than the forehead; the scrobes dilated and much shallower behind, their upper edge touching the eye. *Antennæ* with the scape reaching the posterior margin of the eye. *Elytra* jointly sinuate at the base, the striæ on the inflexed margins broader and deeper than the dorsal striæ. *Venter* with the intercoxal process as broad as the hind coxæ and truncate in front. *Legs* with the hind tibiæ straight or convex dorsally, their corbels open or very narrowly enclosed, the ♂ with the median coxæ produced into a laminate process.

Range. Himalayas.

171. Pachynotus globulicollis, *Redt.*

Pachynotus globulicollis, Redtenbacher,* Hügel's Kaschm. iv, 2, 1848, p. 541, pl. 26, fig. 5.
Cneorhinus obscurus, Redtenbacher,* l. c. p. 544 (n. syn.).

Colour black, with uniform dense brownish-grey scaling, sometimes with a slight coppery reflexion.

Head finely aciculate, the forehead with a narrow central furrow ascending the vertex. *Rostrum* scarcely longer than broad, its sides subparallel, plane above, with a narrow central furrow and without lateral impressions or carinæ. *Antennæ* red-brown, the funicle with the two basal joints equal. *Prothorax* as long as broad—in the ♀, with the sides strongly rounded, broadest slightly behind the middle and narrower than the greatest width of the elytra—in the ♂, globose, the sides very strongly rounded, broadest before the middle and as broad as the greatest width of the elytra; finely coriaceous above, with indistinct depressed granules, which are closer and more distinct laterally, especially in the ♀, the central furrow shallow and sometimes almost obsolete. *Elytra* with the basal margin shallowly sinuate, laterally constricted at the base, the sides subparallel in the middle, broader in the ♀, the punctures in the striæ rather shallow, the intervals slightly convex, the alternate ones a little more raised, the setæ short and erect. *Legs* black, the hind tibiæ very strongly curved in the ♂, normal in the ♀; the front coxæ separated in both sexes, the intermediate coxæ of the ♂ produced into a flattened tubercular process.

Length, ♂ 7½–8½, ♀ 7–7½ mm.; breadth, ♂ 3, ♀ 3½ mm.

KASHMIR (*von Hügel*—type). UNITED PROVINCES: Mussoorie, 7000 ft. (*Lefroy*); Dehra Dun (*Ollendorf*); Mandali, 9000 ft., Jaunsar division, Dehra Dun (Ind. Mus.); Bargarkote, 8000 ft., Kumaon (*Tytler*—Ind. Mus.); Painsur, above Lohba, 8000 ft., Garhwal (*Tytler*—Ind. Mus.).

Type ♂ in the Vienna Museum; also the type of *C. obscurus*, Redt.

There can be no doubt that *Cneorhinus obscurus* is merely the ♀ of *S. globulicollis*.

Genus **ACHLÆNOMUS**.

Achlainomus, Waterhouse, Trans. Ent. Soc. (2) ii, 1853, p. 178; Lacordaire, Gen. Col. vi, 1863, p. 138.

GENOTYPE, *Achlainomus ebeninus*, Waterh.

Agrees with *Pachynotus*, Redt., except in the following particulars:—

Antennæ with joint 7 of the funicle scarcely longer than 6 and not subconical. *Elytra* with the basal margin not elevated, truncate or slightly sinuate. *Sternum* with the side-pieces of the mesosternum fused together and without distinct sutures. *Legs* with the corbels of the hind tibiæ entirely open.

Range. N. India.

Lacordaire excluded this genus from his TANYMECIDES and associated it with *Psalidium* because in the type specimen of *A. ebeninus*, which he examined, the thoracic vibrissæ were absent; but in fresher specimens these setæ are quite distinct, and in other respects the species is obviously very closely allied to *Pachynotus globulicollis*, Redt.

172. **Achlænomus ebeninus**, *Waterh.*

Achlainomus ebeninus, Waterhouse,* Trans. Ent. Soc. (2) ii, 1853, p. 179.

Colour shining black, the elytra thinly covered with minute grey scales and with numerous fine erect setæ which are much longer in the posterior half; head and thorax without scaling.

Head with close fine punctation, the rostral furrow scarcely encroaching on the forehead. *Rostrum* a little dilated at the apex, almost plane above, with fine rather confluent punctation and a deep central furrow. *Antennæ* ferruginous, the funicle with joint 2 equal to or very slightly longer than 1, the remaining joints about as long as broad. *Prothorax* about as long as broad, with the sides strongly rounded in the ♂, less so in the ♀, broadest about the middle, the apex slightly narrower than the base, the upper surface a little flattened in the middle, finely and closely punctate throughout, with a narrow central furrow which does not quite reach the base or apex. *Elytra* oblong-ovate, the sides almost parallel from near the base to behind the middle and rather abruptly narrowed behind, the apices slightly dehiscent, the striæ with rather shallow subcrenate punctures, the intervals even, slightly convex and about as broad as the striæ. *Legs* shiny black, with pale setæ, all the tibiæ denticulate (more strongly in the ♂) and especially the front pair, the latter strongly curved in both sexes, the hind pair in the ♂ only, but with an internal apical projection in the ♀ also.

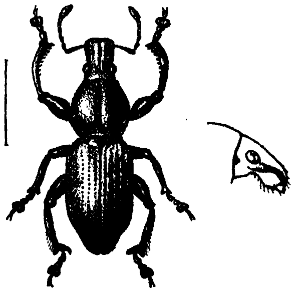

Fig. 64.—*Achlænomus ebeninus*, Waterh., ♂.

Length, 6½–8½ mm.; breadth, 2½–3½ mm.

United Provinces: Kumaon.

Type ♂ in the British Museum.

The structure of the apex of the hind tibia of the ♂ is very similar to that of *Leptomias longulus*, Fst. (see fig. 59).

173. **Achlænomus montarum**, sp. nov.

Colour black, with thin pale scaling (perhaps a good deal abraded in the typical specimens), the elytra without erect setæ, and with only some short depressed setæ on the declivity.

Head and *rostrum* similar to those of *A. ebeninus*. *Antennæ* dark ferruginous, the funicle with joint 1 much longer than 2, 3–7 transverse. *Prothorax* of very similar shape, but slightly broader than long and shorter in relation to the elytra, not flattened above, with very close fine shallow punctation and with a short deep central stria at the base only. *Elytra* as in *ebeninus*, but the apices not dehiscent. *Legs* piceous, the tibiæ not denticulate internally, the front pair strongly curved, the hind pair only slightly so and with the apex not produced internally.

♀ unknown.

Length, 4¾–5 mm.; breadth, 2–2⅛ mm.

Sikkim: Teesta Valley, 13,000–14,000 ft.

Type ♂ in the British Museum.

Subfamily II. OTIORRHYNCHINÆ.

Apart from the three genera *Episomus*, Schh., *Ptochus*, Schh., and *Myllocerus*, Schh., this subfamily is very poorly represented in British India, nearly all the remaining genera containing not more than one or two species each.

The distinction relied upon by Lacordaire for separating this subfamily from his EREMNINÆ, namely, the absence of a post-ocular lobe or vibrissæ on the prothorax, is not a very satisfactory one, for these characters are occasionally so much reduced in members of the latter subfamily as to make their position somewhat doubtful; moreover, it leads in some cases to the separation of genera which otherwise appear to be very closely allied.

Key to the Groups.

1 (4) Corbels of hind tibiæ distinctly enclosed.
2 (3) Tarsal claws free; joint 3 of tarsi not broader than 2 .... **Nothognathides,** [p. 250.
3 (2) Tarsal claws connate at base; joint 3 evidently broader than 2 .... **Episomides,** p. 204.
4 (1) Corbels of hind tibiæ open.
5 (8) Elytra without any humeral angle; insects not capable of flight; hind coxæ reaching margin of elytra.
6 (7) Episterna of metasternum distinct, at least in the anterior half; antennæ long and slender, scape exceeding front margin of prothorax .... **Otiorrhynchides,** [p. 252.
7 (6) Episterna of metasternum imperceptible; antennæ short and stout, scape not exceeding front margin of prothorax .. **Trachyphlœides,** [p. 275.
8 (5) Elytra with a distinct humeral angle; insects capable of flight; hind coxæ not reaching the margin of the elytra .... **Phyllobiides,** p. 278.

Group I. EPISOMIDES.

This section includes the EPISOMIDES and OOSOMIDES of Lacordaire, which he himself admits to be hardly separable. Its principal stronghold is South Africa, though the genus *Episomus* contains a considerable number of Indian species. The insects are for the most part wingless and slow-moving, living on herbs and low bushes. Some of the Malayan species of *Episomus* are quite handsomely coloured, but the Indian forms are mostly sombre. The larvæ are probably all root-feeders.

Key to the Genera.

1 (2) Rostrum continuous with the head, the genæ projecting beyond the mandibles .... PARAPIONUS, g. n., p. 205.

2 (1) Rostrum separated from the head by an oblique or transverse furrow in front of the eye, the genæ not projecting beyond the mandibles.

3 (4) Epistome forming an acute angle behind; funicle of antennæ with dense scaling; tarsi broad and spongy beneath; metepimeron dilated anteriorly; intercoxal process of venter ogival........ EPISOMUS, Schh., p. 207.

4 (3) Epistome forming a raised semicircular plate; funicle of antennæ devoid of scaling; tarsi slender, clothed with long silky hairs beneath; metepimeron not dilated in front; intercoxal process of venter broadly truncate .... LACHNOTARSUS, g. n., p. 248.

Genus **PARAPIONUS**, nov.

TYPE, *Parapionus varicolor*, sp. nov.

Head exserted and continuous with the rostrum; the eyes lateral, rather prominent, almost circular and situated at a little distance from the thorax. *Rostrum* twice as long as the head, broader at its base than the forehead, the apex with a very broad and deep triangular emargination, the external angles projecting beyond the mandibles; the scrobes subdorsal, slightly curved in front, and there deep and almost parallel-sided, then continued more broadly and shallowly straight up to the eyes; the mentum large, rather depressed and entirely filling its cavity, the submentum without a peduncle. *Antennæ* inserted near the apex, the scape rather slender, gradually thickened and reaching the front margin of the thorax; the funicle with the two basal joints longer, 3-6 gradually diminishing, 7=3, the club narrowly ovate. *Prothorax* transverse, convex, truncate at base and apex, the gular margin sinuate. *Scutellum* imperceptible. *Elytra* broadly ovate, truncate at the base, without any humeral angle, with 10 shallow sulci, the margins broadly sinuate above the posterior coxæ. *Sternum* with the anterior coxæ nearer the front margin of the prosternum; the mesosternum with the epimera much smaller than the episterna; metasternum as long as the median coxæ, the episterna distinct, the hind coxæ touching the margin of the elytra. *Venter* with the intercoxal process angulate and rather narrower than the coxæ, segments 2, 3 and 4 subequal; 2 separated from 1 by a deep straight suture. *Legs* rather slender, the femora clavate and simple; the tibiæ almost straight, the front pair produced internally at the apex, the posterior pairs with the corbels enclosed; the tarsi with joint 1 shorter than 2+3, 3 broadly lobate, 4 elongate, the claws connate at the base.

Range. Western India.

Superficially much like *Catapionus*, Schh., but differing in having the rostrum continuous with the head and in its deep apical emargination, the long scape, the absence of a scutellum, etc.

174. **Parapionus varicolor**, sp. nov.

Colour black, the dorsal surface with rather thin scaling and two denser stripes, one on each side of the rostrum, continuing across the prothorax and along intervals 3 and 4 on each elytron; the scaling either pale metallic green, or pinkish grey with a slight metallic reflexion; the underparts with dense scaling which is green in green specimens, and whitish in the grey ones.

Head with close shallow punctation beneath the scaling, the forehead almost plane and with a central furrow. *Rostrum* almost parallel-sided from the base to near the apex, thence slightly narrowed, the upper surface nearly plane and smooth, with a complete narrow central furrow, the dorsal margins rounded in the basal half, the apical projections narrow and bluntly pointed in the ♀, broadly truncate and slightly curving upwards in the ♂. *Antennæ* with green scaling, the scape with subdepressed setæ, the funicle with joint 2 very slightly longer than 1. *Prothorax* with the sides rounded, broadest about the middle, the apex much narrower than the base, the upper surface rather uneven, with confluent shallow punctation (hidden by the scaling) and a broad shallow central furrow from base to apex. *Elytra* broadly ovate, broadest about the middle, the shallow sulci with deep separated punctures, the intervals narrow and costate, with short scattered depressed white setæ. *Legs* with dense green or grey scaling and pale setæ.

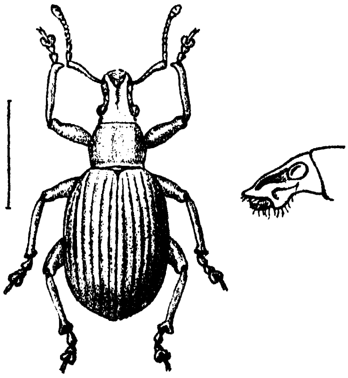

Fig. 65.—*Parapionus varicolor*, Mshl.

Length, 9½ mm.; breadth, 5¼ mm.

BOMBAY: Poona; Bor Ghat (*Dixon*).

Types ♂ ♀ in the British Museum.

The type specimens are of the green form, and in the ♀ the scaling is more dense above, so that the two stripes are less evident, while the green of the underparts is more or less hidden by a white incrustation, which is perhaps adventitious.

Genus **EPISOMUS.**

Episomus, Schönherr, Disp. Meth. 1826, p. 185; Lacordaire, Gen. Col. vi, 1863, p. 175.

Simallus, Pascoe, Journ. of Entom. ii, 1865, p. 420.—Type, *S. sulcicollis*, Pasc.

Type, *Curculio avarus*, F.

Head with a central furrow and a more or less distinct transverse impression behind the eyes, separated from the rostrum on each side by a sinuate transverse furrow in front of the eyes; the latter convex, lateral, prominent, very short ovate and rather acuminate inferiorly. *Rostrum* broader than the forehead at its base, with a variable central furrow, deeply emarginate at the apex, the epistome bare, shiny and forming a sharp acute angle behind; scrobes dorsal, very deep in front, but shallower near the eyes and curving inwards about the middle; the genæ more or less wrinkled and with a strongly curved furrow which extends to the lower surface; mandibles obtuse, prominent and with a strongly marked scar. *Antennæ* inserted at or rather before the middle of the rostrum; the scape exceeding the hind margin of the eye, usually dilated and more or less strongly curved; the funicle 7-jointed, joints 1, 2 and 7 longer than the others, the club 4-jointed. *Prothorax* usually with strong transverse plications and a more or less distinct central furrow, the anterior margin truncate laterally (except in *sulcicollis*), the base either bisinuate or subtruncate, the gular margin shallowly sinuate. *Scutellum* variable, usually well developed, but sometimes invisible and occasionally enclosed in front by the sutural margin of the elytra. *Elytra* not soldered together, with or without a distinct humeral angle, the base slightly covering the basal margin of the prothorax, the posterior declivity steep, the lateral margin sinuate above the posterior coxæ, the striæ or sulci punctate and 10 in number; rudimentary wings present. *Sternum* with the front coxæ nearer the anterior margin of the prosternum; the mesosternum with the epimeron much smaller than the episternum, the intercoxal process dilated at its apex; the metasternum is either equal to, slightly shorter than or slightly longer than the median coxæ, the episternum is extremely narrow and usually quite concealed, with the exception of the enlarged anterior portion, the hind coxæ touch the elytral margin. *Venter* with the intercoxal piece angulated and not broader than the hind coxæ; segments 2, 3 and 4 subequal, 2 separated from 1 by a deep transverse incision, 5 elongate and sharply pointed in the ♀, shorter and broadly rounded in the ♂. *Legs* stout, elongate; the femora unarmed, the posterior pair not reaching the apex of the elytra; the tibiæ almost straight, the two front pairs produced internally at the apex, the posterior pair with the corbels strongly enclosed; tarsi spongy beneath, joint 2 transverse and trapeziform, 3 broadly bilobate, 4 as long as 2+3, the claws connate.

Range. Ceylon, India, Burma, Siam, Malay Peninsula, Sumatra, Java, Borneo, Philippines, China and Japan.

In some sections of this large genus the species are very difficult to discriminate with certainty, as is frequently the case with wingless CURCULIONIDÆ. In most cases the male genitalia appear to offer a safe criterion, but in a few instances these organs present slight differences, the significance of which it has been impossible to determine owing to lack of material and inadequate locality labels. Some of the characters used in the key may appear ambiguous for certain individual specimens. Where such is likely to be the case I have not hesitated to place the same species in both of the two opposing categories, which it is hoped will facilitate identification.

It may be observed that there is sometimes a discrepancy in the statements of Faust and myself as to the relative lengths of the two basal joints of the funicle. This is due to the fact that when the funicle is held straight out in the same plane with the scape the base of the first joint is more or less hidden from above by the apex of the scape. The real length of the first joint can then only be seen from beneath, or the funicle must be bent down at right angles to the scape. An examination of Faust's types shows that in several instances he has been misled in this way. Finally, considerable use has been made in the key of the characters afforded by the relative proportions of the antennal joints. It must therefore be mentioned that, unless otherwise stated, the descriptions apply only to perfect specimens; for the scaling on these organs is often so thick that when it is rubbed off a very considerable difference is produced in the relative length and breadth of the joints.

Key to the Species.

1 (2) Elytra with a very large boss-like tubercle at the top of the declivity on interval 3 .... *bicuspis*, sp. n., p. 215.

2 (1) Elytra without any large tubercles at the top of the declivity.

3 (4) Rostrum with the genæ produced in front beyond the mandibles (especially in the ♂); each elytron with a small, sharply conical tubercle on the suture at some distance above the apex .... *guttatus*, Boh., p. 217.

4 (3) Genæ not produced in front; elytra not bituberculate behind, or, if so, with

the tubercles situated at the actual apex.

5 (80) Elytra with stria 6 ending at the humeral callus, not reaching the base nor meeting stria 9; prothorax more or less deeply bisinuate at the base; elytra separately rounded at the base.

6 (15) Elytra with the suture broadly and deeply impressed as far as the top of the declivity; scaling minute, sparse and confined to the foveæ, which are large and subquadrate.

7 (14) Prothorax very coarsely plicate and with a deep central furrow.

8 (13) Foveæ on elytra deep and regular, elytra without paler spots.

9 (12) Prothorax only slightly broader than long, with a single central furrow, the sides but little rounded; the elytra more elongate, and the suture more strongly elevated on the declivity.

10 (11) Funicle with joint 2 slightly longer than 1, and 3 longer than 4; the scale-like setæ on the lateral intervals of the elytra narrow and pointed at the apex...................... *montanus*, Guér., p. 219.

11 (10) Funicle with joint 2 not longer than 1, joint 3 equal to 4; the scale-like setæ on the elytra nearly twice as broad and truncate or broadly rounded at the apex....................... *arcuatus*, sp. n., p. 219.

12 (9) Prothorax much broader than long, with two additional furrows on each side of the central one; the elytra shorter and broader, and the suture less elevated on the declivity ...... *dejeani*, Fst., p. 220.

13 (8) Foveæ shallow, the transverse ridges which limit them very irregularly developed, being in some parts faint or even obsolete, in others broad and conspicuous; interval 7 with an ovate patch of whitish scales about middle, and a similar smaller spot at apex of interval 5................ *irregularis*, sp. n., p. 221.

14 (7) Prothorax comparatively finely rugose, without deep plications and without a central furrow, but with a central basal impression .... } *montanus*, var. *levicollis*, n., p. 219.

15 (6) Suture of elytra not impressed; scaling dense.

16 (21) Posterior tibiæ of ♂ with a broad perpendicular truncate laminate process at the internal apical angle; apical process of male organ sharply pointed and strongly curved downwards at

the tip; intercoxal process of mesosternum with an obtuse prominence on its basal half.

17 (20) Scutellum more or less completely enclosed in front by the sutural margin; joints 4 to 6 of funicle strongly transverse; pale lateral border of elytra without any lobe-like projection inwards.

18 (19) Funicle with joint 2 slightly longer than 1; lateral green scaling of elytra, when present, not extending further than the 6th stria; apical process of male organ abruptly narrowed and sharply bent downwards at a right angle only near its apex .... *figuratus*, Karsch, [p. 221.

19 (18) Funicle with joint 2 not longer than 1; lateral green scaling extending to 4th stria, suture normally with a broad stripe of pale fawn; apical process of male organ gradually narrowed and forming a continuous downward curve .... *raucus*, Fst., p. 222.

20 (17) Scutellum not enclosed; joints 4 to 6 of funicle quadrate; elytral border with a lobe-like projection at middle. *nilgirinus*, Heller, p. 222.

21 (16) Posterior tibiæ of ♂ with at most a narrow conical process at the internal apical angle; apical process of male organ horizontal and more or less spatulate.

22 (25) Scutellum more or less completely enclosed.

23 (24) Scutellum rounded in front; intercoxal process of mesosternum without any elevation; posterior tibiæ of ♂ strongly tuberculate internally.. *lacerta*, F., p. 223.

24 (23) Scutellum pointed in front; intercoxal process of mesosternum with a rounded elevation near its base; posterior tibiæ of ♂ simple internally.. *connexus*, sp. n., p. 225.

25 (22) Scutellum not enclosed, its front edge on a line with the basal margin of the elytra.

26 (29) Intervals 3, 5 and 7 more elevated than 4 and 6 from base to apex; prothorax with the central furrow very shallow or absent.

27 (29) Costæ on rostrum distinctly sulcate; funicle with the two basal joints equal; elytra with deep, closely punctate striæ; dark stripes on prothorax black and very distinct .... *manipurensis*, sp. n., [p. 225.

28 (27) Costæ on rostrum scarcely impressed; funicle with joint 2 a little longer than 1; elytra much smoother, striæ

shallow and with separated punctures; stripes on prothorax very little darker than the disk .... *inermicollis*, sp. n., [p. 226.

29 (26) Intervals 3, 5 and 7 not more raised.

30 (35) Elytra with a distinct small tubercle at the apex of interval 5.

31 (32) Apices of elytra separately produced into a long sharp process; the white spots on elytra strongly elevated; funicle with joint 2 longer than 1.. *appendiculatus*, Fst., [p. 226.

32 (31) Apices of elytra with only a very short inconspicuous process; white spots on elytra not or very slightly raised; funicle with the two basal joints subequal.

33 (34) Funicle with joint 7 cylindrical and scarcely thinner than the club; rostrum not longer than broad; elytra without dark patches on the declivity. *versutus*, Fst., p. 227.

34 (33) Funicle with joint 7 gradually dilated and much thinner than the club; rostrum a little longer than broad, each elytron usually with a large black patch on the declivity ...... *quatuornotatus*, Desb., [p. 228.

35 (30) Apex of interval 5 not tuberculate.

36 (37) Lateral pale marking on the prothorax with its upper edge far below the level of the eye, the marking continued on to the mesosternum and not on to the base of the elytra .... *andrewesi*, sp. n., p. 229.

37 (36) Lateral pale marking on the prothorax with its upper edge on a level with the lower margin of the eye, the marking continued on to the base of the elytra.

38 (41) Elytra with a broad whitish stripe at the base of intervals 3 and 4, continuing a little further on interval 3 only and then bending sharply inwards on to interval 2.

39 (40) Prothorax with an abbreviated central costa; joint 7 of funicle dilated from base to apex, equal to or shorter than the club; anal segment of ♂ not impressed .... *frenatus*, sp. n., p. 230.

40 (39) Prothorax without a central costa; joint 7 cylindrical, as broad as and longer than the club; anal segment of ♂ with a rounded impression in middle of base .... *obuncus*, sp. n., p. 231.

41 (38) Elytra with at most a short narrow white line on interval 3 only.

42 (45) Apices of posterior tibiæ fringed with uniform yellowish or reddish setæ.

43 (44) Funicle with joint 7 much longer than the club; body with metallic green

scaling, sparse above and dense beneath .... *fabriciusi*, Fst., p. 231.

44 (43) Funicle with joint 7 subconical and shorter than the club; scaling brown above and whitish beneath .... *avuncularius*, sp. n., [p. 232.

45 (42) Apices of posterior tibiæ with a distinct patch of dark reddish brown or blackish brown setæ at the posterior angle.

46 (47) Humeral angles of elytra distinct and prominent.

47 (48) Joint 7 of funicle evidently shorter than the club in both sexes........ *nebulosus*, sp. n., p. 232.

48 (47) Joint 7 not shorter than the club.

49 (64) Joint 7 distinctly longer than the club.

50 (51) Apex of elytra in both sexes produced downwards into a beak-like projection............................ *repandus*, Fst., p. 233.

51 (50) Apex of elytra not so produced.

52 (55) Elytra with an elongate raised pale patch at the top of the declivity on interval 3, and with a dark brown stripe at the base of intervals 4 and 5; funicle with joint 3 longer than broad.

53 (54) Male organ deeply concave between the dorsal carinæ, the apical process unusually narrow, sharply conical and quite symmetrical (fig. 66, *a*) .. *dohertyi*, sp. n., p. 233.

54 (53) Male organ gently convex between the dorsal carinæ, the apical process broadly spatulate and somewhat asymmetrical (fig. 66, *e*) .... *decipiens*, sp. n., p. 234.

55 (52) Elytra with neither a raised pale patch on interval 3, nor a darker stripe on intervals 4 and 5; funicle with joint 3 not longer than broad.

56 (59) Scutellum projecting above the level of the elytra; sulci on elytra of ♀ not broader than the intervals. which are flat; hind tibiæ of ♂ with an internal row of conspicuous tubercles.

57 (58) Legs and antennæ thicker; joint 7 of funicle shorter and thicker (when not abraded); elytra more deeply impressed at base, and with larger and deeper punctures .... *nigropustulatus*, Fst., [p. 235.

58 (57) Legs and antennæ more slender; joint 7 of funicle longer and more slender; elytra only slightly impressed at base, the punctures noticeably smaller .. *sagax*, Fst., p. 235.

59 (56) Scutellum not prominent; sulci on elytra of ♀ evidently broader than the intervals, which are subcarinate; hind tibiæ of ♂ with only inconspicuous granules.

60 (63) Elytra with a strong transverse impression at base, the dorsal outline convex; colour either uniform brown above, or mottled with dark brown patches and irregular pale markings; the subhumeral dark patch usually well developed; the prothorax without any darker lateral stripe.

61 (62) Elytra shorter, with the sides more rounded, the colouring almost uniform brown .... *figulus*, Boh., p. 236.

62 (61) Elytra longer, the sides less rounded, mottled with dark and pale markings .... *figulus*, var. ***nigrosparsus***, Chev., p. 236.

63 (60) Elytra only shallowly impressed at the base, the dorsal outline flat; elytra dark brown above, interval 3 with two small but conspicuous white spots, the subhumeral dark patch absent; the prothorax usually with a rather darker lateral stripe ...... *quadrimaculatus*, sp. n., [p. 237.

64 (49) Joint 7 not longer than the club.

65 (66) Scape elongate and subcylindrical; elytra with the sulci narrower than the intervals; furrow on rostrum not widened in front .... *profanus*, Fst., p. 237.

66 (65) Scape normally stout, curved and gradually dilated to apex; elytra with the sulci broader than the intervals; furrow on rostrum widened in front *figulus* ♂ and *quadrimaculatus* ♂ (see nos. 60 and 63).

67 (46) Humeral angles obsolete or nearly so.

68 (71) Epistome not or but shallowly impressed in the middle.

69 (70) Scutellum large, transverse; elytra with the suture very prominent and subangulate on the declivity; two oblique furrows running from the eye to the gena; mesosternal process not tuberculate .... *uniformis*, Pasc., p. 238.

70 (69) Scutellum small, circular; elytra with the suture not unusually prominent behind and sloping normally; only one oblique furrow from the eye; mesosternal process with a small sharp basal tubercle .... *pyriformis*, sp. n., p. 239.

71 (68) Epistome deeply impressed in the middle, its sides carinate.

72 (75) Joint 7 not longer and much narrower than the club.

73 (74) The oblique furrow from the eye to the gena deep and distinct; the furrow and plications on the prothorax much less deep than usual .. *arduus*, sp. n., p. 239.

74 (73) The oblique furrow from the eye very shallow and indistinct; the furrow and plications on the prothorax deep. *obstrusus*, sp. n., p. 240.

75 (72) Joint 7 evidently longer than the club.

76 (77) Elytra short; legs and antennæ more slender .... *brevipennis*, Fst., p. 241.

77 (76) Elytra more elongate; legs and antennæ stouter.

78 (79) Elytra impressed at the base; interval 3 with a basal pale stripe .... *humeralis*, Chev., p. 241.

79 (78) Elytra not impressed at the base, their dorsal outline continuous with that of the prothorax; interval 3 without a pale basal stripe .... *humeralis* var. *aurivilliusi*, Fst., p. 242.

80 (5) Elytra with stria 6 reaching the base or uniting with stria 9; prothorax truncate or rounded at the base, never bisinuate; elytra truncate or jointly sinuate at the base, without a humeral callus.

81 (94) Anterior margin of prothorax truncate laterally; funicle with joint 7 longer than the club, and 1 longer than 2; scape distinctly curved and not exceeding anterior margin of prothorax.

82 (87) Forehead with two sharply conical elevations.

83 (84) Striæ on elytra shallow, the punctures large and round, as broad as the intervals; prothorax without any darker lateral stripe .... *pudibundus*, Fst., p. 242.

84 (83) Striæ on elytra narrower and deeper, the punctures much less distinct and much narrower than the intervals; prothorax with a sharply defined broad dark lateral stripe, which extends on to the base of the elytra.

85 (86) Scutellum small, but distinct; prothorax not constricted at base, which is evidently broader than the apex, the sides moderately rounded; apices of elytra dehiscent .... *limbaticollis*, sp. n., [p. 243.

86 (85) Scutellum invisible; prothorax constricted at base, which is scarcely broader than the apex, the sides strongly rounded in the middle; apices of elytra jointly rounded .... *oblongus*, sp. n., p. 243.

87 (82) Forehead without conical elevations.

88 (91) Rostrum dilated towards the apex; prothorax as long as broad or slightly longer than broad; dark markings on elytra not terminating abruptly at the declivity; size large (13–17 mm.).

89 (90) Intervals 4, 5 and 6 of the elytra carinate; setæ at posterior apical angle of hind tibiæ black; lower surface of body without any metallic colouring; funicle with joint 3 evidently longer than 4........................ *arrogans*, Boh., p. 244.

90 (89) Intervals 4, 5 and 6 of the elytra not carinate, almost plane; setæ at posterior apical angle of hind tibiæ reddish; lower surface of body with pale metallic greenish or coppery scaling; funicle with joint 3 not or but slightly longer than 4 .... *subnitens*, sp. n., p. 245.

91 (88) Rostrum parallel-sided; prothorax strongly transverse; dark markings on elytra terminating abruptly at the declivity; size smaller (7–10 mm.).

92 (93) Head scarcely impressed behind the eyes, forehead not elevated in the middle; anal segment of ♀ with a shallow median furrow; scutellum invisible; lateral dark marking on elytra terminating transversely behind .... *sennæ*, Fst., p. 245.

93 (92) Head with a deep transverse impression behind the eyes, forehead with two obtuse elevations in the middle; anal segment of ♀ without any median furrow; scutellum small, but distinct; lateral dark marking on elytra terminating obliquely behind ...... *obliquus*, sp. n., p. 246.

94 (81) Anterior margin of prothorax with a sharp projection below the eye; funicle with joint 7 shorter than the club, and 2 longer than 1; scape almost straight and exceeding the anterior margin of the prothorax .. *sulcicollis*, Pasc., p. 247.

175. **Episomus bicuspis**, sp. nov.

Colour earthy brown, under-parts scarcely paler, elytra with vague darker markings, prothorax without paler or darker stripes.

Head scarcely impressed on each side of the central furrow. *Rostrum* about as long as broad, slightly dilated at apex, the central furrow broad, but very shallow posteriorly, the adjoining costæ very shallowly impressed. *Antennæ* with dense brown scaling, the club and joint 7 of the funicle black, joints 1 and 2 subequal, 3 very slightly longer than 4, 7 much shorter and narrower than the club and subcylindrical. *Prothorax* about as long as broad, subcylindrical, a little narrowed at apex, basal margin deeply bisinuate, central furrow shallow. *Scutellum* distinct, bare, enclosed by the suture. *Elytra* separately rounded at the base, the humeral angle prominent, the subhumeral tubercle distinct, apex jointly acuminate; upper surface transversely impressed near base, with broad coarsely punctate striæ, the intervals narrow and costate, 1, 3, 5 and 7 very slightly higher than the others; there is a large boss-like prominence at the top of the declivity on interval 3, but apart from this the intervals are quite without tubercles. *Legs* with dense brown scaling and irregular paler markings towards the apex of the femora; the inner edge of the

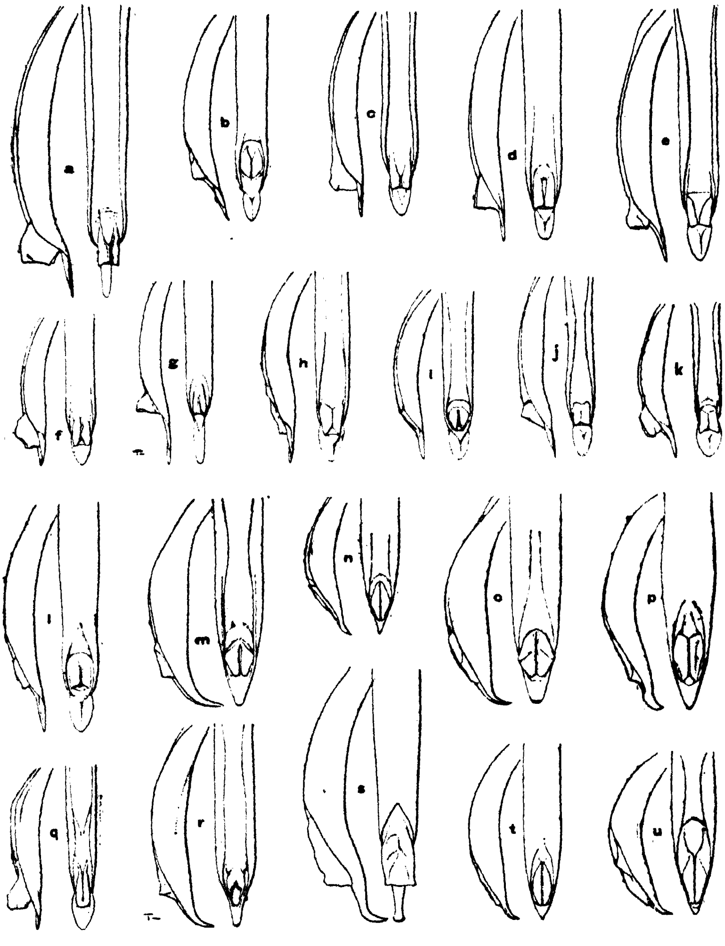

Fig. 66.—Male genitalia of *Episomus*:—a. *E. dohertyi*, Mshl.; b. *E. montanus*, Guér.; c. *E. manipurensis*, Mshl.; d. *E. fabriciusi*, Fst.; e. *E. decipiens*, Mshl.; f. *E. humeralis*, Chev.; g. *E. andrewesi*, Mshl.; h. *E. sagax*, Fst.; i. *E. frenatus*, Mshl.; j. *E. figulus*, Boh.; k. *E. lacerta*, F.; l. *E. arcuatus*, Mshl.; m. *E. raucus*, Fst.; n. *E. pudibundus*, Fst.; o. *E. subnitens*, Mshl.; p. *E. arrogans*, Boh.; q. *E. quadrimaculatus*, Mshl.; r. *E. nilgirinus*, Heller; s. *E. figuratus*, Karsch; t. *E. oblongus*, Mshl.; u. *E. limbaticollis*, Mshl.*

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* The subapical projections seen in the lateral aspects have no specific value; they represent merely the accidentally unretracted portion of the membranous tube that is exserted during copulation from the chitinous tubes here shown, which are formed by the fusion of the two parameres.

hind tibiæ of the ♂ with a row of small tubercles and with a tuft of long curled fulvous setæ at the apex.

♂ more slender, the 7th joint of the funicle much shorter than in the ♀ and the club proportionately longer, the anal segment not impressed.

Length, 10–10½ mm.; breadth, 4½–5½ mm.

BURMA: Ruby Mines (*Doherty*).

Types ♂ ♀ in the British Museum.

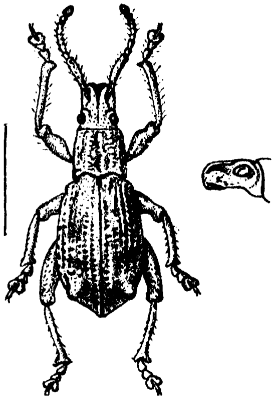

Fig. 67.—*Episomus bicuspis*, Mshl., ♀.

The nearest ally of this species is *E. turritus*, Gyl., subsp. *chinensis*, Fst., which differs in having the head and rostrum much more deeply furrowed; the 7th joint of the funicle is as long as the club and dilated at the apex; the thorax is more transverse and its sides more rounded; the intervals on the elytra are more rugose, and there are additional tubercular prominences on intervals 3, 5 and 7.

176. Episomus guttatus, *Boh.*

Episomus guttatus, Boheman,* Schönh. Gen. Curc. 1845, p. 435; Faust, Hor. Soc. Ent. Ross. xxxi, 1897, p. 138.

Colour dark or light brown above, pale sandy or whitish beneath; well-marked specimens bear a number of round white spots (usually surrounded by a darker ring), as follows: one on the scutellum; two on the suture, one near base, the other on the declivity; one before middle on interval 4; one behind middle on interval 3 and a similar one on interval 6; there is also a small black spot at the apical junction of striæ 3 and 6. These markings may be more or less obsolete, or even entirely absent.

Head transversely impressed behind the eyes, forehead with a single deep central furrow. *Rostrum* much longer than broad, the apex being produced forwards on each side into a very prominent broad jaw-like process; on each side of the central furrow there is sometimes a narrow longitudinal impression, usually more or less obsolete. *Antennæ* with dense brown scaling, the scape almost straight; funicle with joint 1 longer than 2, 3 and 4 subequal, 7 about as long as the club, but a little narrower and cylindrical. *Prothorax* about as long as broad, its sides strongly rounded, broadest about middle, basal margin truncate; upper surface transversely rugose, except the apical part in front of the transverse stria, which is smooth, the central furrow shallow. *Scutellum* distinct, not enclosed by the suture. *Elytra* ovate, jointly subtruncate at the base, without humeral angles, and with a small sharply conical tubercle on the suture just above the apex; the longitudinal curvature rather flat near base, very steep behind, highest behind middle; upper surface not transversely impressed near base, with narrow sulci containing rows of small deep punctures, the intervals broad, plane and smooth. *Legs* with dense light brown scaling and scattered short setæ, femora with a round paler spot near apex; the anterior tibiæ of the ♂ slightly more curved at apex.

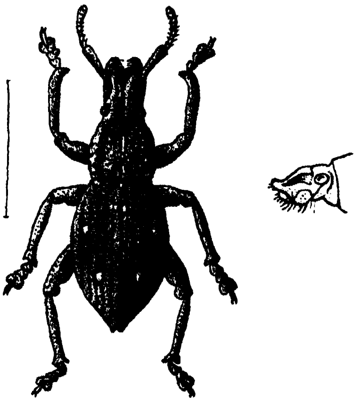

Fig. 68.—*Episomus guttatus*, Boh., ♂.

♂ with the anal segment less acuminate and shallowly impressed.

Length, 9-14 mm.; breadth, 4½-7¼ mm.

ASSAM: Naga Hills; Nongpoh, Khasi Hills (*D. Naoroji*—Pusa Coll.). BURMA: Bhamo and Palon (*Fea*); Gokteik and Maymyo (*H. L. Andrewes*); Chin Hills; Rangoon; Paungde and Tharrawaddy (*G. Q. Corbett*). MALAY STATES: Penang.

Type in the Stockholm Museum.

177. **Episomus montanus**, *Guér.* (fig. 66, *b*).

Episomus montanus, Guérin, Deless. Voy. Inde, ii, 1843, p. 52; Boheman, Schh. Gen. Curc. vii, pt. 1, 1843, p. 88; Faust, Hor. Soc. Ent. Ross. xxxi, 1897, p. 125.
Episomus clathratus, Boheman,* op. cit. p. 89 (♂).

Colour dull black, with light brown scaling in the foveæ only; usually with a small spot of pale scales at the apex of interval 5.

Head with the central furrow very broad and deep, on each side of it a short backward indentation from the transverse ante-ocular furrow. *Rostrum* about as long as broad, slightly dilated near the apex, the central furrow either parallel-sided or with a rounded dilatation in front, the lateral costa bearing a deep curved impression. *Antennæ* with comparatively thin scaling, which is denser and paler on the underside of the scape; the funicle with joint 2 slightly longer than 1, and 3 than 4, 7 conical and a trifle shorter than the club. *Prothorax* a little broader than long, the sides slightly rounded in the ♂ and scarcely so in the ♀, the base bisinuate and somewhat broader than the apex, the central furrow and the lateral plications deep. *Scutellum* small, sometimes scarcely perceptible in ♂. *Elytra* elongate-ovate in ♀, much narrower in ♂, the humeral angle obtuse, the dorsal outline not very convex, beginning to slope gradually behind the middle, the steep posterior declivity sloping somewhat inwards and slightly indented; the shallow sulci contain large subquadrate foveæ, the intervals narrow but not carinate, the suture sharply raised at the top of the declivity and more prominent in ♀. *Legs* with pale scaling, which is very sparse above and dense beneath, the hind tibiæ of the ♂ not granulate internally and without any apical spur.

Length, 11–16 mm.; breadth, 4½–7 mm.

MADRAS: Coonoor, Nilgiri Hills (*W. Davison*); Naduvatum, 7000 ft., Nilgiris (*H. L. Andrewes*); Utakamand.

Type not traced; that of *E. clathratus* in the Stockholm Museum.

I have seen a single ♀ from the Nilgiris in which the prothorax appears much smoother, the deep plications being replaced by much finer superficial rugosities, while the central furrow has disappeared, being represented only by a rounded impression at the base. As in other respects it resembles *E. montanus*, I provisionally treat it as a variety under the name of *levicollis*, var. nov.

178. **Episomus arcuatus**, sp. nov. (fig. 66, *l*).

Very closely allied to *E. montanus*, Guér., and differing only in the following respects:—

Antennæ with joint 2 of the funicle not longer than 1, and 3 equal to 4, the club distinctly stouter. *Prothorax* with the median carinæ much less raised and broken up into a number of irregular sinuosities. *Elytra* distinctly more elongate, the shoulders more sharply angulate, and the dorsal outline with an evidently greater slope (especially in the ♀) from the middle to the top of the posterior declivity, the latter not being indented; the scale-like setæ, especially on the inflexed sides of the elytra, much broader and truncate or broadly rounded at the apex.

Length, 13-16½ mm.; breadth, 5½-7 mm.

Madras: Nilgiri Hills (*Sir G. Hampson*).

Types ♂ ♀ in the British Museum.

The male organ differs from that of *E. montanus* only in having the apical spatula appreciably broader. The two species can be most readily discriminated by a comparison of the squamiform setæ on the elytra.

179. **Episomus dejeani**, *Fst.*

Episomus montanus, var. *dejeani*, Faust, Hor. Soc. Ent. Ross. xxxi, 1897, p. 126.

Dull black, with more or less brown scaling in the depressions only, except along the margins and at the apex where it extends on to the intervals.

Head with a very broad and deep central furrow, the longitudinal lateral impressions indistinct or obsolete, the eyes small. *Rostrum* scarcely as long as broad, almost parallel-sided in both sexes, the central furrow broad and deep throughout and only slightly widened in front, the lateral costæ with a very deep curved impression. *Antennæ* with sparse scaling, except on the underside of the scape where it is dense; funicle with joint 2 not longer than 1, 3 equal to 4, 7 subconical, as long as the club in ♀, shorter in ♂. *Prothorax* much broader than long, the sides strongly rounded, broadest about the middle, the base bisinuate and scarcely broader than the apex; upper surface with a broad deep central furrow lying between two straight and unbroken costæ, and on each side of it two irregular longitudinal furrows. *Scutellum* small and circular, not enclosed. *Elytra* broadly ovate in ♀, narrower in ♂, the shoulders rounded, the dorsal outline flat in ♂, moderately convex in ♀, deepest behind the middle, the posterior declivity sloping inwards; the broad sulci containing large subquadrate foveæ, the intervals narrowly carinate, the suture impressed. *Legs* with sparse brown scaling, which is denser and paler beneath on the femora; hind tibiæ of ♂ not granulate internally.

Anal segment of ♂ not impressed.

Length, 11-12 mm.; breadth, 5-6 mm.

Madras: Nilgiri Hills (*Perrotet*, *Mrs. M. I. Walhouse*, *H. L. Andrewes*); Utakamand (Ind. Mus.).

Type in the Dresden Museum.

This species is quite distinct from *E. montanus*, Guér. In the male organ the tube is broadly impressed dorsally throughout its length, instead of being regularly convex, and the apical spatula is much narrower.

180. Episomus irregularis, sp. nov.

Very nearly allied to *E. montanus* and *E. arcuatus*.

Antennæ with joint 2 of funicle very slightly longer than 1, and 4 subequal, the club as stout as in *E. arcuatus*. *Prothorax* with the sculpturing shallow, as in the last-named species. *Scutellum* prominent, visible from the side. *Elytra* shaped as in *E. montanus*, but the foveæ very shallow, irregular in size and shape, and often indistinct, owing to the fact that the transverse ridges separating them are unevenly developed, being in some places partly or entirely obliterated, and in others unusually dilated, appearing like flattened granules; the intervals narrow subcarinate and more or less undulating, interval 7 with an elongate dilatation about the middle covered with pale scaling; the scale-like setæ shaped as in *E. arcuatus*.

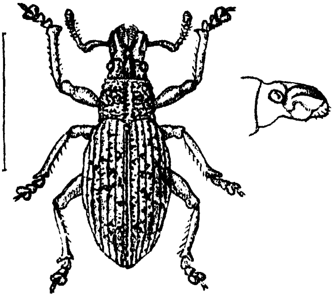

Fig. 69.—*Episomus irregularis*, Mshl.

Length, 15½ mm.; breadth, 6½ mm.

MADRAS: Malabar district.

Type ♀ in the British Museum.

I have seen only the type specimen,

181. Episomus figuratus, *Karsch* (fig. 66, *s*).

Episomus figuratus, Karsch, Berl. Ent. Zeit. 1882, p. 387.
Episomus annulipes, Chevrolat,* Rev. Mens. d'Ent. 1883, p. 77.
Episomus ceylonicus, Faust,* Hor. Soc. Ent. Ross. xxxi, 1897, p. 161.

Colour black, the upper surface with dense light or dark brown scaling, often variegated with paler spots or patches; the inflexed margins of the thorax and elytra with pale blue, or greenish, or simply whitish scaling, this lateral scaling never extending above the 6th stria.

Head with a broad central furrow, without lateral impressions. *Rostrum* about as long as broad, roundly dilated towards apex, the dorsal costæ evidently sulcate. *Antennæ* with the second joint of funicle slightly longer than first, joint 7 cylindrical, narrower than the club, about as long as the club in ♂, a little longer in ♀.

Prothorax as long as broad in ♀, slightly longer in ♂, subparallel from base to beyond middle and narrower at the apex, truncate at base and with a broad and deep central furrow. *Scutellum* small, enclosed in front by the sutural margin. *Elytra* elongate, ovate, sharply acuminate at the apex, especially in ♀, separately rounded at the base, without any distinct humeral angle; upper surface transversely impressed at the base, the striæ broad and with large deep punctures, the intervals narrow but almost plane, the suture distinctly elevated on the declivity, especially in the ♀. *Legs* with dense greenish or grey scaling, the posterior pairs of tibiæ usually with a darker median patch; the hind tibiæ of ♂ not dentate, but with a laminate internal projection at apex.

♂ with the anal segment shallowly impressed at apex.

Length, 11½–16 mm.; breadth, 5½–7¾ mm.

CEYLON: (*Col. Yerbury. Nietner*); Kandy (*E. E. Green*); Bandarawella and Nalanda (*Dr. W. Horn*); Pera, Kitugalle and Balangoda (*G. Lewis*).

Type in the Berlin Museum; of *E. annulipes* at Stockholm; of *E. ceylonicus* at Dresden.

The distinctions given by Faust for his *E. ceylonicus* are its slightly broader and shorter shape, the whitish scaling at the sides of the elytra and the absence of the indistinct white spots on the upperside. These characters, however, all vary considerably in different specimens. without any correlation one to another.

182. **Episomus raucus**, *Fst.* (fig. 66, *m*).

Episomus raucus, Faust,* Hor. Soc. Ent. Ross. xxxi, 1897, p. 162.

This species is very closely allied to the preceding one, which it evidently represents on the mainland. I have seen only two males and two females, one of the former being a typical specimen of Faust's. The structural differences which distinguish it from *E. figuratus* are as follows:—The second joint of the funicle is not longer than the first, the elytra are less acuminate at the apex and less rounded at the base, and the intervals 5, 6 and 7 are narrowly carinate posteriorly. The colour differs also, in that the lateral green scaling of the elytra extends up to the 4th stria, the dorsal part of the prothorax is also green, and the sutural area of the elytra is broadly pale fawn. In other respects the species quite agrees with *E. figuratus*.

Length, 13½–15 mm.; breadth, 6½–7¼ mm.

MADRAS: Trivandrum (*Atkinson*); Trichinopoli (*Rebière*); Kodaikanal (*L. V. Newton*—Pusa Coll.).

Type in the Dresden Museum.

183. **Episomus nilgirinus**, *Heller* (fig. 66, *r*).

Episomus nilgirinus, Heller,* Stett. Ent. Zeit. 1908, p. 131.

Colour brown, prothorax with a darker lateral stripe which continues for a short distance on the base of intervals 4–7 of the elytra; sides of prothorax below the level of the eye with pale metallic greenish or coppery scaling, the same colouring continued along the side of the elytra to the apex, with a lobe-like widening at middle reaching the 6th stria; intervals 3 and 4 with a pale patch at the top of the declivity; the centre of the sternum and the abdomen with green scaling.

Head with the central furrow dilated into a fovea, not impressed laterally. *Rostrum* as long as broad, dilated towards apex, the central furrow much widened in front, the lateral costæ deeply impressed at base. *Antennæ* with joint 2 of the funicle slightly longer than 1 and 7, 3 longer than 4, 7 subconical, narrower than and scarcely as long as the club. *Prothorax* as long as broad, cylindrical from base to beyond middle and narrowed at the apex, basal margin slightly bisinuate; upper surface roughly plicate, the central furrow deep. *Scutellum* small, obovate, not enclosed. *Elytra* rather narrowly ovate, separately rounded at base, with a distinct blunt humeral angle; upper surface transversely impressed at base, the longitudinal curvature strongly convex, with broad striæ containing large punctures, the intervals even, narrower than the striæ in ♂, as broad in ♀, the suture only slightly elevated on the declivity. *Legs* with pale scaling, the bases of the posterior femora darker; hind tibia of ♂ not granulate, but with an internal laminate process at the apex.

Anal segment of ♂ not impressed, joint 7 of funicle similar to that of ♀.

Length, 12–12½ mm.; breadth, 5¼–6 mm.

MADRAS: Ouchterlony Valley, 2500–3000 ft., Nilgiri Hills (*H. L. Andrewes*—type); Palur, South Arcot (*G. Lund*—Pusa Coll.).

Types ♂ ♀ in the Dresden Museum.

184. **Episomus lacerta**, *F.* (fig. 66, *k*).

Episomus lacerta, Fabricius,* Spec. Ins. i, 1781, p. 190; Olivier, Ent. v, 83, 1807, p. 354, pl. vi, f. 68, pl. xii, f. 148; Boheman, Schh. Gen. Curc. ii, 1834, p. 476.

Episomus nubeculosus, Boheman,* op. cit. vii, pt. 1, 1843, p. 92.

Episomus lacerta, var. *bohemani*, Faust, Hor. Soc. Ent. Ross. xxxi, 1897, p. 160.

Colour varying from chalky-grey to dark brown, the under-parts being always paler; the thorax has usually a darker lateral stripe, and rarely two broad whitish dorsal stripes which are continued on the base of the elytra; the latter have a usually ill-defined broad oblique paler stripe behind middle, followed by a large darker patch on the declivity; in well-marked specimens there are the following small pale round spots: one at the top of the declivity on interval 3, another a little in front of it on interval 7, and the third at the apex of interval 5, these spots being often slightly raised.

Head with a deep central furrow and a short stria on each side of it. *Rostrum* as long as broad, not, or very slightly, dilated towards apex, the central furrow deep, the dorsal costæ distinctly sulcate. *Antennæ* with the two basal joints of the funicle equal, joint 7 variable, in the type form it is cylindrical, as long as and very little narrower than the club. *Prothorax* a little broader than long, subparallel from base to about middle, thence narrowed to the apex, basal margin shallowly bisinuate, the central furrow broad and deep. *Scutellum* small, enclosed anteriorly by the sutural margin. *Elytra* broadly ovate, rather variable in shape, the shoulders rounded, not acuminate at apex, the suture scarcely elevated on the declivity; upper surface without any definite basal impression, the striæ deeply and closely punctate, stria 6 not reaching the base, the intervals narrow and subcostate. *Legs* with dense pale scaling, the posterior femora without darker markings; the hind tibiæ of ♂ with an internal row of very prominent tubercles.

Length, 7½–13 mm.; breadth, 4–7¼ mm.

BENGAL: Calcutta (Ind. Mus.); Orissa. BOMBAY: Mercara, N. Coorg (*T. Bainbrigge Fletcher*—Pusa Coll.); on bajri, Surat (Pusa Coll.); Belgaum (*H. E. Andrewes*); Sampgaon and Sutgati, Belgaum (*R. P. Barrow*); Londa, Belgaum (*H. V. Kemball*). MADRAS: on tur, Samalkot; on field beans, Coimbatore (Pusa Coll.); Mysore (Ind. Mus.); Polibetta, S. Coorg (*T. B. Fletcher*—Pusa Coll.); Athurrapam, Salem dist. (Pusa Coll.); Kallar, 1000 ft., Teppukadu, 2500 ft., and Pillur, 3000 ft., Nilgiri Hills (*H. L. Andrewes*); Anamalai Hills, 3500–4000 ft. (*H. L. Andrewes*); Madura (*C. Somers Smith*).

Type in the British Museum; type of *E. nubeculosus* at Stockholm; of *E. bohemani* at Dresden.

This common and widespread species varies considerably not only in size, colour and shape, but also in the structure of the 7th joint of the funicle. In the type form this joint is cylindrical, about as long as and only slightly narrower than the club. In Faust's variety *bohemani* it is more slender, evidently widening from base to apex and with a tendency to become shorter than the club. In a ♂ and ♀ from the Nilgiris (*Sir G. Hampson*) this joint has become still more reduced, being slightly broader than long and much shorter than the club. This form may be known as var. *piger*, nov. As these three forms of the 7th joint are not correlated with any other constant differences and are themselves variable to some extent, it seems preferable to treat them as mere varieties. Faust has erroneously stated that Fabricius's type was a uniformly whitish-grey example; it is really a dark brown insect, having the lighter markings of paler brown. In the type of *E. nubeculosus* the paler markings are almost white, but they have practically the same distribution, and structurally the two forms are inseparable.

Mr. H. E. Andrewes notes that in Belgaum this weevil was generally found on a kind of bean grown beside and between rice-fields.

Mr. Maxwell Lefroy records ('Indian Insect Life,' 1909, p. 384) that *E. lacerta* has been found in numbers on cotton plants, feeding on the bark. An account of the life-history of the species has been published by Mr. T. Bainbrigge Fletcher ('Some South Indian Insects,' 1914, p. 327).

185. **Episomus connexus**, sp. nov.

Colour dark earth-brown above, without definite markings, paler beneath, and sometimes with traces of greenish scaling.

Head with a very deep central furrow, the lateral longitudinal striæ obsolete. *Rostrum* and *antennæ* as in *E. lacerta*, the 7th joint of the funicle very slightly longer than the club and a little dilated towards the apex. *Prothorax* a little broader than long, its sides slightly rounded, broadest about middle, basal margin bisinuate, the central furrow broad and deep. *Scutellum* almost enclosed, acuminate in front and more or less angulated laterally. *Elytra* oblong-ovate, differing only from those of *E. lacerta* in being more parallel-sided, rather more rounded at the base and more steeply declivous posteriorly in the ♂. *Legs* with uniform dense brownish scaling.

Anal segment of ♂ broadly truncate at apex, the hind tibiæ not tuberculate internally.

Length, 7–9 mm.; breadth, 4¾–5¾ mm.

TENASSERIM: Tavoy (*Doherty*).

Type ♂ in the British Museum.

The apical segment of the venter of the ♂ is more strongly transverse and less narrowed apically than in *E. lacerta*.

186. **Episomus manipurensis**, sp. nov. (fig. 66, *c*).

Colour dark brown, the apical area and inflexed margins of elytra paler, the latter being whitish in the basal half; interval 3 with two indistinct white spots, one before, the other behind the middle; thorax with a broad black lateral stripe with a paler edging dorsally; the under-parts whitish.

Head with a deep narrow furrow and very faint lateral impressions. *Rostrum* as long as broad, dilated towards apex, the central furrow deep and narrow, the lateral costæ strongly impressed. *Antennæ* with the scape comparatively slender; funicle with joint 2 about equal to 1 or 7, 3 distinctly longer than 4, 7 dilated from base to apex, narrower but scarcely shorter than the club. *Prothorax* slightly longer than broad, cylindrical from base to beyond middle, then rapidly narrowed, base bisinuate; upper surface less rugosely plicate than usual, the central furrow almost obsolete. *Scutellum* not enclosed, small, bare, circular and rather prominent. *Elytra* separately rounded at base, shoulders sharply prominent; upper surface transversely impressed at base, the longitudinal curvatures fairly convex, with deep and strongly punctate striæ, the intervals 3, 5 and 7 broader and more elevated than the alternate ones, interval 3 with a slightly raised whitish spot behind middle, the suture rather sharply carinate on the declivity. *Legs* with pale scaling, the bases of posterior femora rather darker; hind tibiæ of ♂ scarcely granulate internally.

Anal segment of ♂ not impressed, joint 7 of funicle not shorter than that of ♀.

Length, 12½–13½ mm.; breadth, 5½–6¾ mm.

ASSAM: Manipur (*Doherty*).

Types ♂ ♀ in the British Museum.

187. **Episomus inermicollis**, sp. nov.

Upper surface nearly uniform dark brown, sides and apex paler; thorax lighter brown, with a darker lateral stripe; the under-parts whitish.

Head with a deep narrow furrow and without lateral impressions. *Rostrum* as long as broad, dilated towards apex, the central furrow narrow and the lateral impressions very faint. *Antennæ* with the scape rather slender; funicle with joint 2 distinctly longer than 1 and slightly longer than 7, 3 longer than 4, 7 strongly dilated from base to apex and slightly shorter than the club. *Prothorax* about as long as broad, apex a little narrower than the base, sides slightly rounded, broadest before middle, base bisinuate; upper surface almost devoid of plications, with two transverse impressed lines on each side, one near the apex, the other behind the middle, the central furrow nearly obsolete. *Scutellum* small and round. *Elytra* as in *E. manipurensis*, except that their general appearance is smoother, the striæ are not so deep, the punctures shallow and further apart, and there is no elevated spot on interval 3. *Legs* with uniform pale scaling; hind tibiæ of ♂ without granules.

Anal segment of ♂ with a shallow apical impression; joint 7 of funicle not shorter than that of ♀.

Length 11–12½ mm.; breadth, 5–6 mm.

ASSAM: Khasi Hills (*Col. W. F. Badgeley*).

Types ♂ ♀ in the British Museum.

188. **Episomus appendiculatus**, *Fst.*

Episomus appendiculatus, Faust, Hor. Soc. Ent. Ross. xxxi, 1897, p. 139.

Under-parts and the inflexed margins of elytra varying from pale brownish to chalky white. Upper surface of prothorax brown, sometimes with a faint darker lateral stripe; elytra brown, the lateral band on the prothorax (when present) vaguely invading intervals 3, 4 and 5 to about one-third from base; each elytron with the following elevated white spots: one on interval 3 before middle, one each on 2, 3 and 7 behind middle, and one at apex of 5.

Head scarcely impressed on each side of the central furrow. *Rostrum* longer than broad, scarcely dilated towards apex, the dorsal costæ shallowly impressed. *Antennæ* with dense grey scaling; funicle with joint 2 longer than 1, 3 slightly longer than 4, 7 about as long as the club, a little dilated at apex and there as broad as the base of the club. *Prothorax* about as long as broad, subparallel from base to beyond middle, then narrowed to apex, basal margin deeply bisinuate, the central furrow shallow. *Scutellum* moderately large, not enclosed. *Elytra* ovate, separately rounded at the base, with quite a sharp humeral angle and a distinct subhumeral prominence, acuminate at the apex, each elytron bearing a short sharp process; upper surface transversely impressed near base, the striæ broad and with large punctures, stria 6 not reaching the base; the intervals narrow, subcostate, the suture elevated on the declivity, the raised white spots small but conspicuous. *Legs* with brownish-grey scaling, the bases of the posterior pairs of femora darker.

♂ with the anal segment not impressed, the granules on the inner edge of the hind tibiæ extremely small.

Length, 11½–14 mm.; breadth, 5¾–7 mm.

UNITED PROVINCES: Allahabad. TIBET (?—Coll. Bowring). MALACCA (*teste* Faust).

Types, ♂ in Dresden Museum, ♀ in Brussels Museum.

189. Episomus versutus, *Fst.*

Episomus versutus, Faust,* Ann. Mus. Civ. Gen. xxxiv, 1894, p. 191 (1895).

Colour light or dark brown above, under-parts light brown or whitish; prothorax without distinct darker stripes, the dark colour of the upperside not sharply separated from the paler underside; elytra with a small pale spot before middle on interval 3, a similar spot at the apex of interval 5, and three more behind middle on 2, 3 and 7; these spots are often more or less obliterated.

Head with a short sulcus on each side of the central furrow. *Rostrum* as long as broad, dilated near apex, the central furrow evidently broader than on the forehead. *Antennæ* stout; funicle with joint 2 scarcely longer than 1 and equal to 7, the latter cylindrical, longer and slightly narrower than the club, 3 quadrate and a little longer than 4. *Prothorax* slightly broader than long, its sides subparallel from base to near apex and then narrowed, the basal margin deeply bisinuate; upper surface strongly plicate, the central furrow deep. *Scutellum* large, rather pear-shaped. *Elytra* separately and strongly rounded at the base, humeral angle distinct in ♀, less so in ♂, apices slightly produced in both sexes; upper surface with a shallow basal impression, the dorsal curvature moderate, flatter in ♂, the striæ about as broad as the intervals and with large, rather distant punctures, the suture distinctly elevated posteriorly in both sexes, the posterior white spots slightly elevated, especially that on interval 5. *Legs* with pale brown scaling, posterior femora with a whitish spot towards apex; hind tibiæ of ♂ with minute flattened granules internally.

Length, 10¾–12½ mm.; breadth, 5½–6½ mm.

BURMA: Bhamo, Teinzo (*Fea*). ASSAM (*teste* Faust).

Types ♂ ♀ in the Genoa Museum.

190. **Episomus quatuornotatus**, *Desbr.*

Episomus quatuornotatus, Desbrochers des Loges,* Journ. Asiat. Soc. Beng. 1890, p. 212; Faust, Hor. Soc. Ent. Ross. xxxi, 1897, p. 141.

Episomus prainæ, Faust, Stett. Ent. Zeit. 1891, p. 265 (printed "*pracuæ*" in error).

Colour earth-brown above, varying from pale brown to chalky grey beneath; pronotum without dark or light stripes; each elytron with two distinct whitish spots on interval 3, one before and one behind middle, and a less distinct spot at the apex of 5; on the declivity a large irregular blackish-brown patch, very variable in size and tint, and some variable and ill-defined blackish markings on the disk.

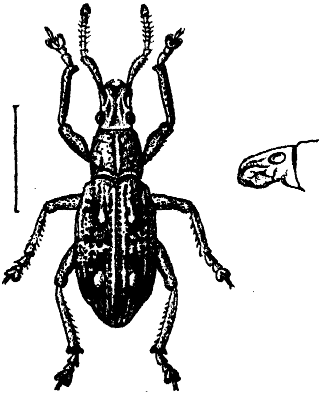

Fig. 70.—*Episomus quatuornotatus*, Desbr.

Head with the central furrow narrow and fairly deep, without lateral impressions. *Rostrum* rather longer than broad, slightly dilated at apex, the central furrow rather broad and shallow, the costæ with a short basal impression. *Antennæ* with the two first joints of the funicle subequal, 3 longer than 4, 7 black, slightly dilated towards apex, a little shorter, and evidently narrower than the club. *Prothorax* about as long as broad, the sides subparallel from base to near apex and there narrowed, the basal margin deeply bisinuate, the central furrow broad and shallow.

Scutellum distinct, not enclosed, with dense brown scaling. *Elytra* oblong-ovate, separately rounded at base, humeral angles well developed, the suture distinctly carinate on the declivity; upper surface transversely impressed near base, the striæ broad and deep, with large subquadrate punctures, the intervals narrow and subcostate. *Legs* with greyish-brown scaling and some vague darker markings on the posterior femora.

♂ narrower, the anal segment not impressed, the tubercles on the hind tibiæ almost obsolete.

Length, 10½–12½ mm.; breadth, 5–6 mm.

ASSAM: Silonibari, N. Lakhimpur (*H. Stevens*). SIKKIM: Ging Lebong, 4500 ft. (*H. M. Lefroy*—Pusa Coll.); Mungphu (*Atkinson*); Gopaldhara, Rungbong Valley, Darjiling dist. (*W. K. Webb*). UNITED PROVINCES: Allahabad.

Type in the Indian Museum; of *E. prainæ* at Dresden.

191. **Episomus andrewesi**, sp. nov. (fig. 66, *g*).

Colour light or dark brown, the disk of the prothorax lighter, the pale green lateral area beginning far below the level of the eye and continued on to the mesosternum and not on to the base of the elytra; the latter with the following pale metallic green markings in the ♂ type: a stripe on the basal one-third of interval 3 connecting at its apex with a spot on 2, behind middle a transverse lunulate marking on intervals 1–4, a small ill-defined patch at the apex of intervals 4–7, a subtriangular irregular lateral patch which reaches neither the base nor the margin and extends inwardly to a point on the 6th stria. In the ♀ these markings are much less pronounced.

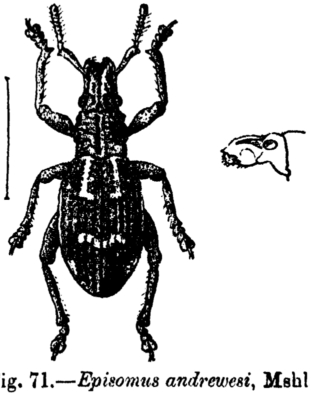

Fig. 71.—*Episomus andrewesi*, Mshl.

Head with a narrow furrow, shallowly impressed laterally and with a trace of two small tubercles on the vertex. *Rostrum* slightly longer than broad, almost parallel-sided, the central furrow deep and narrow, the lateral impressions shallow. *Antennæ* with joint 2 of the funicle slightly longer than 1 but shorter than 7, 3 and 4 equal and slightly transverse, 7 subcylindrical, as broad as but longer than the club. *Prothorax* as long as broad, subcylindrical, but slightly narrower at the apex, the basal margin bisinuate, coarsely plicate and with a deep central furrow. *Scutellum* distinct, circular, not enclosed. *Elytra* ovate, separately rounded at the base, the humeral angles obsolescent; upper surface transversely impressed at base, the longitudinal curvature convex, the striæ with large deep punctures, the intervals even, as broad as the striæ and with short curved subrecumbent setæ, the suture slightly raised on the declivity. *Legs* with pale scaling, the base of the posterior femora slightly darker; hind tibiæ of ♂ granulate internally.

Anal segment of ♂ not impressed; the funicle as in ♀.

Length, 11–12 mm.; breadth, 5–6 mm.

MADRAS: Ouchterlony Valley, 2500–3000 ft., Nilgiri Hills (*H. L. Andrewes*).

Types ♂ ♀ in the British Museum.

192. **Episomus frenatus**, sp. nov. (fig. 66, *i*).

Colour greyish brown, prothorax with a whitish stripe on each side, which is produced on to the elytra on intervals 3 and 4, with an angulate extension on to interval 5 at a little distance from the base, it continues for only a short distance on interval 4 and half as far again on 3, then bending sharply inwards and terminating on 2; a faint transverse whitish band behind middle on intervals 2 to 4; inflexed margins with a whitish patch reaching stria 8 near base, but with a lobe-like extension inwards at middle as far as stria 6.

Head with a deep central furrow and shallow lateral impressions. *Rostrum* rather longer than broad, its sides subparallel, the central furrow dilated in front, the lateral costæ impressed at base. *Antennæ* slender; funicle with joint 2 longer than 1 and about equal to 7, 3 and 4 equal and not broader than long, 7 dilated to apex, shorter and narrower than the club. *Prothorax* a little broader than long, apex narrower than base, sides gently rounded, broadest about middle, base bisinuate, upper surface shallowly plicate, the central furrow broad but very shallow and containing an abbreviated carina. *Scutellum* small, not enclosed. *Elytra* ovate, separately rounded at base, without any humeral angle; upper surface impressed at base, the dorsal curvature distinctly convex, with deep striæ containing large deep punctures, the intervals even, broader than the striæ (except on the disk in the ♂), slightly convex and without raised spots. *Legs* with uniform pale scaling; hind tibiæ with a single small tubercle about the middle of the inner edge.

Anal segment of ♂ not impressed.

Length, 9½ mm.; breadth, 5 mm.

MADRAS: Pirmaad, Travancore (*Mrs. G. S. Imray*).
Types ♂ ♀ in the British Museum.

193. **Episomus obuncus**, sp. nov.

Ground colour of upper side dark brown, with pale markings quite similar to those of *E. frenatus*, with which the species agrees structurally except in the following characters:—

Rostrum with the lateral costæ more elevated and the longitudinal impression on them rather shorter and deeper. *Antennæ* with the scape evidently broader, the scape shorter and stouter, joint 2 shorter than 7, joints 3 to 6 subequal and strongly transverse, 7 cylindrical, as broad as and longer than the club. *Prothorax* more deeply plicate, the central furrow with its edges more raised and without any median carina. *Elytra* with the apical area more produced in the ♂. *Legs* rather stouter; hind tibiæ of ♂ with 3 to 5 small granules along the apical half of the inner edge.

Anal segment of ♂ with a rounded impression in the middle of the base.

♀ unknown.

Length, 11–11½ mm.; breadth, 5–5¼ mm.

MADRAS: Trivandrum (Ind. Mus. and Pusa Coll.).
Type ♂ in the British Museum.

194. **Episomus fabriciusi**, *Fst.* (fig. 66, *d*).

Episomus fabriciusi, Faust,* Hor. Soc. Ent. Ross. xxxi, 1897, p. 187.

Under-parts with dense metallic green scaling. Upper side black, with sparse green scaling; prothorax with two broad subdenuded stripes; elytra with the apex and the lateral margins as far as stria 7 with dense green scaling; on the disk there is a large subquadrate patch at the base and a common transverse band behind middle of denser green scales, and also many irregular small green spots in the striæ; the suture is brownish throughout.

Head with the central furrow broad and shallow, and without lateral impressions. *Rostrum* as long as broad, its sides subparallel, the central furrow broad and shallow, the costæ with a distinct short basal impression. *Antennæ* with pale green scaling, the club and joint 7 of the funicle black; joints 1 and 2 subequal, 3 and 4 subequal, 7 subconical, shorter than the club. *Prothorax* as long as broad, its sides slightly rounded, the basal margin bisinuate, central furrow deep. *Scutellum* not enclosed, rather transverse. *Elytra* elongate-ovate, separately rounded at base, the humeral angle rounded, the subhumeral prominence indistinct, the suture slightly elevated on the declivity only; upper surface shallowly depressed near base, the striæ broad and deeply punctured, the intervals about as broad as the striæ, smooth and costate. *Legs* with dense green scaling, with a darker patch about the middle of the posterior femora.

♂ with the anal segment not impressed; the hind tibiæ without tubercles; the 7th joint of the funicle shorter in the ♀.

Length, 11½–12 mm.; breadth, 5–6 mm.

MADRAS: Ramnad; Madura (*C. Somers Smith*); Trichinopoli (*Rebière*); Cuddapah (*Rev. T. Campbell*).

Types ♂ ♀ in the Dresden Museum.

195. **Episomus avuncularius**, sp. nov.

Colour light brown above, the thorax with a broad dark brown lateral stripe, which extends on to the base of the elytra and broadens vaguely backwards over the disk; under-parts whitish; elytra without white spots.

Head with a deep furrow and shallow lateral impressions. *Rostrum* as long as broad, slightly dilated towards apex, central furrow as on the head, the lateral costæ deeply impressed. *Antennæ* with joint 2 of the funicle a little longer than 1, but shorter than 7, 3 distinctly longer than 4, 7 elongate, slightly dilated at apex, much longer and narrower than the club. *Prothorax* as long as broad, cylindrical to near apex, and there slightly narrowed, upper surface plicate, the central furrow broad and deep. *Scutellum* not enclosed, almost circular. *Elytra* similar in general facies to those of *manipurensis*, but with the humeral angles less sharp; the intervals are approximately equal in width and the alternate ones are not raised, nor are there any elevated spots. *Legs* with pale scaling and faint darker markings on the femora.

♂ unknown.

Length, 12 mm,; breadth, 6 mm.

ASSAM: Patkai Hills (*Doherty*).

Type ♀ in the British Museum.

With the type I have associated another ♀ (also taken by Doherty in Assam) which agrees with it in every respect, except that joint 7 of the funicle is rather shorter and broader, being almost as broad as the club.

196. **Episomus nebulosus**, sp. nov.

Colour pale fawn, the prothorax with a broad, sharply defined, blackish stripe on each side, which is continued on to the base of the elytra between the intervals 2 and 5 and then vaguely pervades the disk, the latter being variegated with paler spots in the sulci; under-parts pale fawn or greyish.

Head almost plane and without lateral impressions. *Rostrum* as long as broad, the sides almost parallel, the central furrow dilated in front, the lateral costæ not impressed. *Antennæ* with joint 2 of the funicle longer than 1 or 7, the latter much shorter than the club and widening from base to apex, 3 slightly longer than 4. *Prothorax* a little longer than broad, subcylindrical, but slightly narrowed at the apex, the basal margin bisinuate, the upper surface less coarsely wrinkled than usual, the central furrow comparatively shallow. *Scutellum* small, circular, not enclosed. *Elytra* narrowly ovate, separately rounded at the base, with a distinct obtuse humeral angle; the upper surface impressed at the base, the dorsal curvature rather strongly arched, with broad sulci containing large punctures, the intervals very narrow, the suture sharply elevated on the declivity. *Legs* with pale scaling, the femora with a faint paler patch, the hind tibiæ of the ♂ not denticulate.

Anal segment of the ♂ with a central impression; joint 7 of the funicle shorter than in the ♀.

Length, 8¾–10½ mm.; breadth, 4–4⅞ mm.

ASSAM: Manipur (*Doherty*).

Types ♂ ♀ in the British Museum.

197. **Episomus repandus**, *Fst.*

Episomus repandus, Faust,* Ann. Mus. Civ. Gen. xxxiv, 1894, p. 193 (1895).

Colour almost uniform brown above, under-parts greyish white; thorax without distinct darker stripes, the upper- and under-side colouring not sharply separated; elytra without white spots, the lateral pale area narrow.

Head and *prothorax* as in *E. profanus*, Fst. *Antennæ* with the scape short, broad, strongly curved and densely setose; funicle with joints 1 and 2 subequal, 7 longer than 2, much longer and more slender than the club, 3 subquadrate and about equal to 4. *Elytra* as in *E. versutus*, Fst., but with the apices produced slightly downwards and not outwards, without any raised white spots and with the suture much less raised behind. *Legs* with almost uniform pale scaling, the hind tibiæ of ♂ not even granulate internally.

Length, 11 mm.; breadth, 5½ mm.

BURMA: Karen Hills (*Fea*). CAMBODIA (*teste* Faust).

Types ♂ ♀ in the Genoa Museum.

198. **Episomus dohertyi**, sp. nov. (fig. 66, *a*).

Colour pale whitish or brownish grey; the prothorax with a broad, sharply defined, dark brown lateral stripe, which is continued on to the elytra, being well defined internally along the base of the third stria, but vaguely and unevenly invading the disk behind that; second interval usually with a whitish spot at the top of the declivity.

Head scarcely impressed on each side of the central furrow. *Rostrum* as long as broad, its sides roundly dilated near apex, the central furrow scarcely broader than on the head, the lateral costæ distinctly impressed. *Antennæ* with joint 2 of the funicle scarcely longer than 1 and equal to 7, 3 distinctly longer than 4, 7 cylindrical, longer and scarcely narrower than the club. *Prothorax* about as broad as long, cylindrical from base to beyond middle and there evidently narrowed, basal margin shallowly bisinuate; upper surface plicate, the central furrow deep. *Scutellum* moderate, almost circular, not enclosed. *Elytra* separately rounded at base and with a prominent humeral angle; upper surface transversely impressed at base, the longitudinal curvature rather flat, with deep and strongly punctured striæ which are not broader than the intervals, the suture elevated on the declivity, interval 3 with a slightly raised whitish spot at the top of the declivity. *Legs* with pale scaling, the femora with faint darker markings; hind tibiæ of ♂ with a few small granules internally.

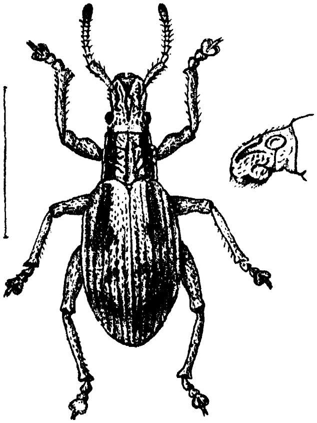

Fig. 72.—*Episomus dohertyi*, Mshl.

♂ with the anal segment not impressed, and the 7th joint of the funicle rather shorter than in ♀.

Length, 12–16 mm.; breadth, 6–8 mm.

ASSAM: Patkai Hills (*Doherty*); Sibsagar (*Atkinson*).

Types ♂ ♀ in the British Museum.

199. **Episomus decipiens**, sp. nov. (fig. 66, *e*).

In the 3 ♂ ♂ and 1 ♀ of this species which I have examined I can as yet find no reliable external character by which they may be distinguished from *E. dohertyi*, but the marked and constant differences in the male genitalia render it impossible to regard them as belonging to the same species (see fig. 66, *a*, *e*). In *E. dohertyi* the male organ is about one-fifth longer (in specimens of the same size) and distinctly more arched in profile; the upper surface is deeply concave between the dorsal carinæ for more than half its length and there is a shallow longitudinal impression on each side, whereas in *E. decipiens* the space between the carinæ is gently convex transversely, so that the carinæ appear much less prominent, and there is no lateral impression; the apical process in

E. dohertyi is unusually narrow, being very sharply conical and quite symmetrical, whereas in *E. decipiens* the process is twice as broad and of the usual spatulate form, being slightly asymmetrical.

Length, 12–14½ mm.; breadth, 5½–6½ mm.

ASSAM: Nemotha, Cachar.

Type ♂ in the British Museum.

200. **Episomus nigropustulatus**, *Fst.*

Episomus nigropustulatus, Faust,* Ann. Mus. Civ. Gen. xxxiv, 1894, p. 191 (1895); Faust, Hor. Soc. Ent. Ross. xxxi, 1897, p. 135.

Colour earth-brown above, turning gradually to grey or whitish on the under-parts, the prothorax without dark stripes, the elytra with three large velvet-black patches on interval 4 and a similar large subhumeral patch.

Head transversely impressed behind the eyes and without lateral impressions. *Rostrum* a little broader than long, its sides roundly dilated near the apex, the central furrow dilated in front, the lateral costæ with a short basal impression. *Antennæ* with the scape very broad, strongly curved and with a shallow longitudinal impression above; the funicle with joints 1, 2 and 7 subequal in length, 3 and 4 subequal and strongly transverse, 7 (when not abraded) cylindrical, as broad as and longer than the club. *Prothorax* rather broader than long, the sides subparallel from the base to the middle, then narrowed to the apex, the basal margin strongly bisinuate, coarsely plicate above and with a broad central furrow. *Scutellum* large and circular. *Elytra* ovate, narrower in the ♂, separately rounded at the base, the humeral angle distinct; upper surface with a distinct basal impression, the dorsal curvature convex, the sulci with large deep punctures and rather broader than the intervals, the suture moderately elevated behind. *Legs* with grey or brownish scaling, the femora with faint darker markings; hind tibiæ of the ♂ with a row of very prominent tubercles.

Length, ♂ 12, ♀ 11–12 mm.; breadth, ♂ 6, ♀ 5¾–6½ mm.

BURMA: Tharrawaddy (*G. Q. Corbett*); Palon (*Fea*).

Type ♂ in the Genoa Museum.

201. **Episomus sagax**, *Fst.* (fig. 66, *h*).

Episomus sagax, Faust,* Hor. Soc. Ent. Ross. xxxi, 1897, p. 134.

Very closely allied to *E. nigropustulatus*, Fst., but to be distinguished as follows:—

Antennæ with joint 7 of the funicle a little longer and more slender. *Prothorax* with the upper edge of the lateral pale marking well defined. *Elytra* with the dark patches absent or small, the basal transverse impression shallower and therefore the dorsal curvature flatter, the sulci not broader than the intervals, the punctures in them smaller.

Length, ♂ 11½, ♀ 11½–12¼ mm.; breadth, ♂ 5½–5¾, ♀ 6–6¼ mm.

ASSAM: Naga Hills (*Doherty*); Dilkusha (*Inglis*); Sylhet. BENGAL: Madhyapara, Dacca (Pusa Coll.).

Types ♂ ♀ in the Dresden Museum.

It is doubtful whether this species should be regarded as more than a local race of *nigropustulatus*. In the male genitalia which I have examined those of *sugax* are slightly broader and a little more curved on the lower edge than the single one of *nigropustulatus* that I have seen; but it remains to be proved whether these differences would hold good in a long series.

202. **Episomus figulus**, *Boh.* (fig. 66, *j*).

Episomus figulus, Boheman,* Schönh. Gen. Curc. ii, 1834, p. 476; Faust, Hor. Soc. Ent. Ross. xxxi. 1897, p. 136.
Episomus griseus, Chevrolat,* Rev. Mens. Ent. 1883, p. 8.
Episomus nigrosparsus, Chevrolat,* op. cit. p. 79; Faust, op. cit. p. 136.

Colour (of typical form) nearly uniform light earthy-brown above, the under-parts greyish or whitish, the dividing line on the prothorax fairly sharp.

Head with a broad central furrow and a shallow impression on each side. *Rostrum* about as long as broad, dilated towards the apex, the central furrow widened in front, the lateral costæ impressed. *Antennæ* with the two basal joints of the funicle equal, 3 subquadrate and a little longer than 4, 7 slightly broader at the apex, about as long as 2 and not longer than the club. *Prothorax* parallel-sided from the base to beyond the middle, thence narrowed to the apex, the base bisinuate, coarsely plicate above and with a deep central furrow. *Scutellum* broadly oval, free. *Elytra* separately rounded at the base, with obtuse humeral angles; upper surface impressed at the base, the dorsal curvature rather strongly convex, the sulci broad and with large punctures, the intervals much narrower and with sparse depressed setæ, the suture only slightly raised behind. *Legs* with pale scaling, the hind tibiæ of the ♂ granulate internally.

Anal segment of the ♂ simple; joint 7 of the funicle rather shorter than in the ♀.

Length, 11½–12 mm,; breadth, 5–5½ mm.

BENGAL: Calcutta (Ind. Mus.).

Type ♂ in the Stockholm Museum; also the type of *E. griseus*.

E. griseus, Chevr., is quite indistinguishable from *figulus*. As Faust has remarked, the typical form appears to be decidedly rare, and I have seen no recent specimens of it.

Episomus figulus, var. **nigrosparsus**, *Chev.*

The colouring differs from that of the typical form in that the elytra bear irregular dark brown blotches, and are often variegated with ill-defined paler spots behind the middle; the subhumeral patch always large and distinct. The size is larger and the width of the elytra is rather less in proportion to the length, with the sides rather less rounded, this being especially noticeable in the ♂. Yet in spite of this rather striking difference in form, I cannot find any distinction in the male organ from that of the only male *E. figulus* which I have been able to dissect. This is probably a well-marked local race.

Length, 12–14 mm.; breadth, 5–6½ mm.

ASSAM: Khasi Hills.

Type in the Stockholm Museum.

203. **Episomus quadrimaculatus**, sp. nov. (fig. 66, *q*).

Colour dark brown above, without any discal or subhumeral dark patches on the elytra, but with two small distinct white spots on interval 3, one before the middle, the other at the top of the declivity; the inflexed margins greyish white, with a sharp dividing line on the prothorax.

Very closely allied to *E. figulus* var. *nigrosparsus*, but rather narrower in form and with the dorsal curvature distinctly more flat, while the outline of the posterior declivity is rather more deeply sinuate, especially in the ♀. The prothorax is more cylindrical, and the slight elevation near the base of the median mesosternal process in *E. figulus* is quite lacking. In profile the male organ is much more strongly arched dorsally in the middle, while, when seen from above, it is much more strongly narrowed from the middle to the base of the terminal spatula.

Length, 10–13 mm.; breadth, 4¼–5¾ mm.

ASSAM: Naga Hills and Manipur (*Doherty*); Deju, N. Lakhimpur (*H. Stevens*); Sibsagar (Ind. Mus.).

Types ♂ ♀ in the British Museum.

204. **Episomus profanus**, *Fst.*

Episomus profanus, Faust,* Ann. Mus. Civ. Gen. xxxiv, 1894, p. 189 (1895).
Episomus profanus, var. *punctiger*, Faust,* l. c.

Colour uniform pale or dark brown above, the thorax without darker stripes; under-parts chalky white; in the var. *punctiger* interval 2 of the elytra bears two small whitish spots, the posterior one being frequently absent.

Head faintly impressed on each side of the central furrow. *Rostrum* as long as broad, evidently dilated at apex, the central furrow not broader than on the forehead. *Antennæ* comparatively slender, scape elongate, subcylindrical, slightly curved and sparsely setose; funicle with joint 2 rather longer than 1 or 7, the latter cylindrical, slightly narrower than the club and about equal to it in length, joints 3 and 4 equal and subquadrate. *Prothorax* a little broader than long, its sides parallel from base to beyond middle and then rapidly narrowed; upper surface deeply plicate, the central furrow deep. *Scutellum* ovate, longitudinal. *Elytra* separately rounded at the base, humeral angle distinct, apices slightly produced in ♀; upper surface with a rather shallow transverse impression at base, dorsal curvature moderate, striæ deep, closely punctate and narrower than the intervals, which are broadly costate, the suture elevated on the declivity, especially in the ♀. *Legs* with pale scaling and darker markings on the posterior pairs of femora; hind tibiæ of ♂ with a few small granules internally.

Length, 11–13 mm.; breadth, 4½–6½ mm.

Burma: Karen Hills (*Fea*).

Types in the Genoa Museum.

The variety *punctiger* differs from the type form only in the presence of the white spots on the elytra.

205. Episomus uniformis, *Pasc.*

Episomus uniformis, Pascoe.* Ann. Mag. Nat. Hist. (5) xx, 1887, p. 349; Faust, Hor. Soc. Ent. Ross. xxxi, 1897, p. 129.

Colour uniform sandy brown, but sometimes with a dark brown spot behind the middle on interval 4 and another before the middle on interval 10.

Head with a shallow transverse impression behind the eyes, forehead with a deep central furrow, but without lateral impressions. *Rostrum* dilated towards apex, the central furrow very broad and deep, the lateral furrows very shallow or even obsolete, epistome scarcely impressed in the middle and not carinate at the sides. *Antennæ* with dense brownish scaling; funicle with joints 1 and 2 subequal, 3 equal to 4, 7 cylindrical, as broad as and longer than the club. *Prothorax* slightly shorter than its width at base, sides almost straight, broadest at base and very slightly

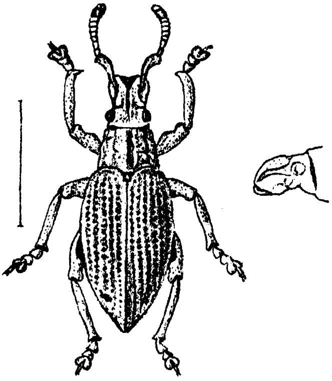

Fig. 73.—*Episomus uniformis*, Pasc.

narrowed anteriorly, the basal margin deeply bisinuate; upper surface transversely rugose and with a shallow central furrow. *Scutellum* large and transverse, coloured like the elytra. *Elytra* elongate-ovate, separately rounded at the base, without humeral angles, broadest about middle and not produced at the apex; the longitudinal curvature flat near the base, very steep posteriorly, the suture being strongly elevated into a sharp carina on the declivity in both sexes, with the greatest depth behind middle; upper surface transversely impressed near the base, with broad sulci containing large deep punctures, the intervals narrow and subcostate. *Legs* with dense uniform pale brown scaling and scattered short setæ; the hind tibiæ of ♂ strongly tuberculate, and the posterior femora with a very blunt prominence on their inner edge.

♂ with the anal segment more broadly rounded apically.

Length, 11–14 mm.; breadth, $4\frac{3}{4}$–$5\frac{3}{4}$ mm.

ANDAMANS (*Capt. Wimberley*).

Type ♀ in the British Museum.

206. **Episomus pyriformis**, sp. nov.

Colour greyish brown, without definite markings, the inflexed margins of elytra paler and sometimes with traces of metallic green scaling.

Head with a deep narrow furrow and shallow lateral impressions. *Rostrum* as long as broad, slightly dilated towards apex, the central furrow widened in front, the lateral impressions very faint. *Antennæ* with joint 2 of the funicle about as long as 1 or 7, 3 and 4 equal and transverse, 7 as broad as and longer than the club. *Prothorax* as long as broad, cylindrical, only slightly narrower at apex, base deeply bisinuate; upper surface strongly plicate, the central furrow shallow. *Scutellum* not enclosed, small and round. *Elytra* rather pear-shaped, broadest behind middle, separately rounded at base, without any humeral angle; upper surface transversely impressed at base, the longitudinal curvature very convex, with broad deeply punctured striæ, which are broader than the intervals dorsally, the latter costate and without elevations, the suture sharply carinate on the declivity. *Legs* with uniform pale scaling.

♂ unknown.

Length, $9\frac{1}{2}$–$11\frac{1}{2}$ mm.; breadth 5–$5\frac{3}{4}$ mm.

CEYLON.

Type ♀ in the British Museum.

207. **Episomus arduus**, sp. nov.

Upper surface dark brown, under-parts whitish; prothorax without distinct dark lateral stripes; elytra with a whitish line on interval 3 from the base to about the middle, interval 1 whitish from before the middle to the apex.

Head with a deep narrow furrow and without lateral impressions. *Rostrum* a little longer than broad, its sides subparallel, the central furrow not dilated, the lateral costæ shallowly impressed. *Antennæ* with joint 2 of the funicle about equal to 1 or 7, 3 and 4 equal and subquadrate, 7 subcylindrical, as long as the club but narrower. *Prothorax* as long as broad, its sides straight, but slightly narrowed in front, the base bisinuate, plications less rugose than usual, the central furrow broad and shallow. *Scutellum* not enclosed, fairly large and almost circular. *Elytra* oval, broadest about middle, separately rounded at base, the humeral angles indistinct; upper surface scarcely impressed at base, the dorsal curvature rather flat, dorsal striæ containing large shallow punctures and not broader than the intervals, which are even and subcostate, the lateral striæ much narrower and shallower, the suture carinate on the declivity. *Legs* with uniform pale scaling.

♂ unknown.

Length, 10–10½ mm.; breadth, 5–5¼ mm.

Assam: Manipur (*Doherty*).

Type ♀ in the British Museum.

208. **Episomus obstrusus**, sp. nov.

Upper side sandy brown, the prothorax with two narrow paler dorsal stripes, the elytra mottled with ill-defined paler and darker spots, the under surface greyish white, the inflexed sides of the elytra with a greenish tinge.

Head with a narrow central furrow, the lateral impressions indistinct. *Rostrum* about as long as broad, slightly dilated in front, the central furrow deep and almost parallel-sided, the adjoining costæ very shallowly impressed, the margins of the epistome obtusely carinate, its posterior angle only slightly produced. *Antennæ* with joints 1, 2 and 7 of the funicle subequal, 3 quadrate, 4–6 transverse, 7 cylindrical, about as long as and narrower than the club. *Prothorax* broader than long, the sides subparallel from the base to the middle, thence gradually narrowed to the apex, the plications not very deep, the central furrow broad and rather shallow. *Scutellum* not enclosed, almost circular. *Elytra* ovate, separately rounded at the base, the humeral angle much reduced, the subhumeral prominence distinct, with a shallow transverse impression at the base, the dorsal curvature rather flat, the lower half of the posterior declivity almost vertical and scarcely sinuate, the sulci broad, with large punctures, the intervals narrower. *Legs* with uniform pale scaling.

♂ unknown.

Length, 9½–10 mm.; breadth 4½–5 mm.

Burma: Haka, Chin Hills (*F. E. Venning*).

Type ♀ in the British Museum.

In general facies this insect looks very like a small specimen of *E. siamensis*, Fst. (a species which probably will be found also in Burma), but the latter differs, *inter alia*, in its very stout scape, which has a broad ridge on the upper surface, and in its unusually long seventh funicular joint, which is equal to 2 and 3 together.

209. Episomus brevipennis, *Fst.*

Episomus brevipennis, Faust,* Hor. Soc. Ent. Ross. xxxi, 1897, p. 137.

Colour light brown above, with vague darker markings on the elytra; under-parts chalky white, the two colours sharply divided on the sides of the prothorax.

Head with a shallow impression on each side. *Rostrum* about as long as broad, its sides parallel, the central furrow not broader than on the forehead, the lateral costæ deeply impressed. *Antennæ* with the scape moderately broad and gradually dilated; funicle with joint 2 equal to 1 and shorter than 7, the latter cylindrical, longer and slightly narrower than the club, 3 subquadrate and a little longer than 4. *Prothorax* transverse, its sides parallel from base to beyond middle, then narrowed to apex, basal margin deeply bisinuate; upper surface strongly plicate, the central furrow deep. *Scutellum* large and rounded. *Elytra* rather broadly ovate, separately rounded at base, the shoulders obtusely rounded, upper surface distinctly but narrowly impressed at base, the dorsal curvature slight, the sulci deep and closely punctured, the intervals rather broad and almost plane.

Length, 10½ mm.; breadth, 5¾ mm.

BURMA.

Type ♀ in the Dresden Museum.

Described from a single ♀ from Faust's collection.

210. Episomus humeralis, *Chev.* (fig. 66, *f*).

Episomus humeralis, Chevrolat,* Rev. Mens. Ent. 1883, p. 81; Faust, Hor. Soc. Ent. Ross. xxxi. 1897, p. 130.
Episomus aurivilliusi, Faust,* op. cit. p. 132.
Episomus schönherri, Faust,* l. c.

Colour rather dark brown above, the inflexed margins greyish or whitish, the lateral dividing line on the thorax sharply defined; the thorax with a broad, slightly darker stripe on each side, which can be traced on to the base of the elytra; the latter with a distinct subhumeral brown patch and usually with a narrow whitish stripe along the basal part of interval 3 and sometimes faintly continued on the prothorax.

Head with a deep central furrow. *Rostrum* as long as broad, slightly dilated near the apex, the central furrow of even width, the lateral costæ sulcate at the base. *Antennæ* with the two basal joints of the funicle equal, 3 slightly transverse and scarcely longer than 4, 7 cylindrical, longer than 2, longer and narrower than the club. *Prothorax* as long as or slightly longer than broad, otherwise as in *E. brevipennis*, Fst. *Scutellum* oval, almost enclosed. *Elytra* rather elongate ovate, separately rounded at the base, the humeral angle obsolete; the upper surface scarcely impressed at the base, the longitudinal curvature flat, deeply punctato-striate, the intervals broader than the striæ, the suture rather strongly elevated behind in the ♀. *Legs* with pale scaling, the bases of the hind femora darker, the hind tibiæ of the ♂ granulate internally.

Anal segment of the ♂ not impressed; the funicle as in the ♀.

Length, 10½–13½ mm.; breadth, 5¼–6¾ mm.

UNITED PROVINCES: Saharunpur (*teste* Faust). ASSAM: Sylhet; Khasi Hills, 1000–3000 ft. (Pusa Coll.).

Type ♀ in the Stockholm Museum; also type of *E. aurivilliusi*; *E. schönherri* at Dresden.

The characters given by Faust for distinguishing *E. schönherri* from *E. humeralis* (he admits them to be "extraordinarily similar") are that the former has rather more slender antennæ and legs, a slightly shorter rostrum, the elytra less abruptly acuminate behind, their greatest depth being behind instead of at the middle, and the punctures in the dorsal striæ somewhat closer together. After a careful comparison of the types it appears to me that such of these distinctions as are appreciable are merely individual rather than specific characters.

In the case of *E. aurivilliusi*, the distinctions upon which Faust lays most stress are the greater convexity of the eyes, and the fact that the flat dorsal outline of the elytra is quite continuous with that of the thorax. The eye character is certainly quite unreliable, but the flat profile of typical *E. aurivilliusi* undoubtedly gives it a distinctive appearance as compared with *E. humeralis*. However, in a series of six males before me I find intermediate forms, while the genitalia yield no indications of a specific difference.

211. **Episomus pudibundus**, *Fst.* (fig. 66, *n*).

> *Episomus pudibundus*, Faust,* Ann. Mus. Civ. Gen. xxxiv, 1894, p. 185 (1895).

Colour of entire upper surface light or dark brown, the elytra sometimes with irregular paler markings; the under-parts varying from pale sandy to white, rarely with a distinct greenish tinge.

Head with a shallow transverse impression on vertex, forehead with a single deep furrow and with two elevated tubercles. *Rostrum* as long as broad, slightly dilated towards apex, the costæ on each side of the central furrow shallowly impressed. *Antennæ* with dense pale scaling; funicle with joint 1 longer than 2, 3 slightly longer than 4 or subequal, 7 cylindrical, longer and slightly narrower than the club. *Prothorax* a little broader than long, the sides gently rounded, broadest about middle, the basal margin truncate; upper surface transversely plicate, the central furrow shallow. *Scutellum* very small, with paler scaling than the suture. *Elytra* elongate-ovate, basal margin jointly and shallowly sinuate, without any humeral angle, and not transversely impressed near the base; the longitudinal curvature flat near base, deepest behind middle, the suture plane throughout: sulci rather shallow, with large, separated and often ocellated punctures, the intervals broad and plane. *Legs* with dense pale scaling and with very short, sparse setæ; hind tibiæ of ♂ with an internal tooth at about one-fourth from the apex.

Length, 9½–12¾ mm.; breadth, 4¾–6¼ mm.

Burma: Rangoon (*Capt. A. K. Weld Downing*); Tharrawaddy and Paungde (*Corbett*); Karen Hills and Palon (*Fea*).

Type in the Dresden Museum.

212. **Episomus limbaticollis**, sp. nov. (fig. 66, *u*).

Colour light brown above, with a broad dark brown stripe passing from the eye along the side of the prothorax and continued indefinitely on the base of the elytra; under surface grey, the pale colour on the prothorax being sharply separated from the dark lateral stripe on a level with the lower edge of the eye.

Head as in *E. pudibundus*, but with the two median tubercles rather smaller and the eyes more convex. *Rostrum* slightly longer than broad, evidently dilated anteriorly, the central furrow rather shallow and widening in front, the adjoining costæ scarcely impressed; the normal impressed line running obliquely downwards from the eye is absent. *Antennæ* with fawn-coloured scaling and brownish setæ, the structure as in *E. pudibundus*. *Prothorax* as long as broad, the sides moderately rounded, broadest before the middle, the base truncate and distinctly broader than the apex, the upper surface coarsely plicate, the central furrow rather shallow. *Scutellum* small, but distinct. *Elytra* elongate-ovate, almost parallel-sided in the middle (♂), the basal margin jointly and shallowly sinuate, without any humeral angle and not transversely impressed at the base, the apices briefly dehiscent; the striæ rather deep and narrow, the punctures somewhat elongate, the intervals broad and plane, their edges more sharply defined than in *E. pudibundus*. *Legs* with pale fawn scaling, the hind tibiæ of ♂ with a single tooth on the inner side at about one-fourth from the apex.

Length, 12½ mm.; breadth, 6 mm.

Burma: Ruby Mines (*Doherty*).

Type ♂ in the British Museum.

213. **Episomus oblongus**, sp. nov. (fig. 66, *t*).

Closely allied to *E. limbaticollis*, but differing in the following particulars:—

Upperside colouring grey instead of brown.

Head with the eye smaller, its length about equal to the distance between its hind margin and the prothorax; the dark brown band not extending so far above the eye. *Rostrum* with a distinct impressed line running obliquely downwards from the eye. *Antennæ* with the scape shorter, and broader at the apex, the scaling pale grey and the setæ white. *Prothorax* with the sides strongly rounded in the middle, distinctly constricted at the base, which is scarcely broader than the apex. *Scutellum* invisible. *Elytra* more parallel-sided, with the dorsal outline much steeper behind, the apices jointly rounded, the striæ deeper and with the punctures less evident, the intervals 3 to 7 with their outer edges distinctly angulate.

Length, 12½ mm.; breadth, 6 mm.

BURMA: Minbu (*T. Bainbrigge Fletcher*).

Type ♂ in the British Museum.

214. **Episomus arrogans**, *Boh.* (fig. 66, *p*).

Episomus arrogans, Boheman,* Schönh. Gen. Curc. vii, pt. 1, 1843, p. 90; Faust, Hor. Soc. Ent. Ross. xxxi, 1897, p. 198.
Episomus cataleucus, Chevrolat,* Rev. Mens. Ent. 1883, p. 77.

Colour of upper side light brown, the prothorax with two broad, dark longitudinal stripes, the elytra with intervals 5, 6 and 7 dark brown throughout; sides of head and thorax white, of elytra grey or yellowish, except close to the base, where they are white.

Head with a shallow transverse impression on vertex, forehead with a broad deep central furrow. *Rostrum* as long as broad, evidently dilated at apex, the two costæ only faintly impressed. *Antennæ* with dense pale scaling; the funicle with joint 1 longer and broader than 2, 3 slightly longer than 4, 7 cylindrical, longer and thinner than the club. *Prothorax* as long as broad, subcylindrical, the basal margin truncate; upper surface rugose, the central furrow shallow. *Scutellum* very small, coloured like the suture. *Elytra* ovate, jointly sinuate at the base, without humeral angles; the longitudinal curvature flat, highest in the middle; upper surface not impressed transversely near base, the three juxtasutural sulci narrow and shallow, the outer ones broader and deeper, the suture roundly costate on the declivity, 2, 3 and 4 broad and plane throughout, 5 and 6 narrow and subcarinate. *Legs* with dense light brown scaling, the posterior pairs of femora with the basal two-thirds dark brown; the hind tibiæ of the ♂ with a narrow stria along the inner edge, with a sharp black tooth beyond middle and a smaller one on each side of it (sometimes they are all absent).

♂ with the anal segment with a broad longitudinal furrow; ♀ with the apex of the elytra more sharply produced.

Length, 13½–16½ mm.; breadth, 6½–8 mm.

Bombay: N. Kanara (*T. R. D. Bell*); Bombay (*Fontanier*). Madras: Utakamand. Burma: Gokteik (*H. L. Andrewes*); Karen Hills (*Fea*); Chin Hills.

Type in the Stockholm Museum, also type of *E. cataleucus.*

215. **Episomus subnitens**, sp. nov. (fig. 66, *o*).

Colour light brown, the prothorax with a broad sharply defined dark lateral stripe, which is continued on to intervals 3–6 of the elytra and becomes gradually lighter behind, interval 2 sometimes with a broad stripe of pale metallic green scaling; inflexed margins of the prothorax and elytra pale sandy or brown and more or less washed with metallic green or coppery scaling.

Head with a broad deep furrow and a slight rounded elevation on each side of it. *Rostrum* about as long as broad, slightly dilated near the apex, the central furrow widened in front, the lateral costæ with a deep longitudinal impression. *Antennæ* with joint 2 of the funicle distinctly shorter than 1 and about as long as 7, 3 and 4 equal and transverse, 7 cylindrical, as broad as the club and a little longer. *Prothorax* as long as broad, the sides subparallel or slightly dilated from base to beyond middle, then narrowed to apex, the basal margin truncate, coarsely plicate and with a deep central furrow. *Scutellum* very small. *Elytra* broadly ovate in the ♀, narrower in the ♂, jointly sinuate at base, without any humeral angles; upper surface not impressed at base, the longitudinal curvature moderate, with deep striæ containing large punctures which are more or less confluent towards base in striæ 3–6, the intervals much broader than the striæ and almost plane, the suture scarcely elevated on the declivity. *Legs* with pale scaling, sometimes with a metallic reflexion, the posterior pairs of femora with a faint darker band; hind tibiæ of ♂ with one large and one small tubercle close to the apex.

Anal segment of ♂ with a broad median furrow.

Length, ♂ 16, ♀ 13½–17 mm.; breadth, ♂ 7½, ♀ 6½–8½ mm.

Burma: Pegu (*Atkinson*); Mergui, Tenasserim (*Atkinson*). Java.

Types ♂ ♀ in the British Museum.

216. **Episomus sennæ**, *Fst.*

Episomus sennæ, Faust,* Ann. Mus. Civ. Gen. xxxiv, 1894, p. 186 (1895).

Upper side light brown, under-parts whitish or light brown; prothorax with a broad dark lateral stripe, which is continued on to the elytra on the base of intervals 4–7, extends along 5–7 nearly to middle and then is dilated obliquely inwards, forming a sharp angle on interval 2 at the top of the declivity, where it terminates abruptly and transversely.

Head scarcely impressed behind the eyes, with a broad deep furrow, the lateral parts not elevated nor impressed. *Rostrum* subquadrate, its sides parallel, the central furrow widened in front, the lateral costæ with longitudinal impressions. *Antennæ* with the scape strongly curved; joint 1 of the funicle longer than 2 and as long as 7, 3 longer than 4, 7 cylindrical, as broad as the club but longer. *Prothorax* broader than long, the apex hardly narrower than the base, its sides slightly rounded, broadest about middle, the basal margin truncate; upper surface roughly plicate, with a deep central furrow. *Scutellum* invisible. *Elytra* broadly ovate, subtruncate at base, without any humeral angles; upper surface not impressed at base, the longitudinal curvature slightly convex, with broad striæ containing large deep punctures, the intervals even, about as broad as the striæ, the suture scarcely elevated behind. *Legs* with pale scaling and sometimes a dark transverse band near the apex of the femora.

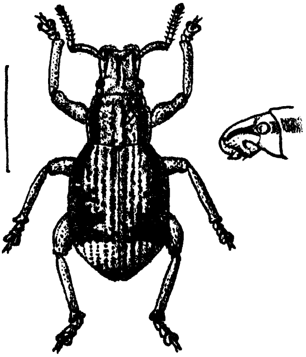

Fig. 74.—*Episomus sennæ*, Fst., ♀.

Anal segment of ♀ with a shallow median furrow, as well as the usual lateral ones; ♂ unknown.

Length, 7½–10 mm.; breadth, 4¼–5½ mm.

BURMA: Bhamo (*Fea*).

Type ♀ in the Genoa Museum.

Closely allied to *E. iconicus*, Pasc. (=*laticollis*, Pasc.) from Cambodia.

217. **Episomus obliquus**, sp. nov.

Upper side light brown, under-parts whitish; prothorax with a broad lateral dark brown stripe, which is continued on to the base of the elytra on intervals 4–7, extending from there to behind middle and terminating abruptly and obliquely at the declivity.

Head with a very deep transverse impression behind the eyes, the forehead roundly elevated on each side of the very broad and deep central furrow. *Rostrum* subquadrate, its sides parallel, the central furrow dilated, the lateral costæ distinctly impressed.

Antennæ with the scape almost straight and gradually thickened, funicle with joint 1 longer than 7, 3 much longer than 4, 7 cylindrical, longer than 2, as broad as the club but longer. *Prothorax* strongly transverse, base truncate and a little broader than the apex, sides rounded, broadest at middle: upper surface roughly plicate, with a deep central furrow. *Scutellum* small, but distinct. *Elytra* oblong-ovate, not much rounded laterally, truncate at base and without any humeral angle; upper surface not impressed at base, the longitudinal curvature moderately convex, in other respects similar to *E. sennæ*.

Anal segment of ♀ without a median furrow.

♂ unknown.

Length, 9½ mm.; breadth, 5 mm.

INDIA (type). BURMA: Maymyo, 3500 ft. (*T. B. Fletcher*—Pusa Coll.).

Type ♀ in the British Museum.

218. **Episomus sulcicollis**, *Pasc.*

Simallus sulcicollis, Pascoe,* Journ. of Ent. 1865, p. 420, pl. xvii. f. 8.

Episomus auriculatus, Faust, Ann. Mus. Civ. Gen. xxxiv, 1894, p. 187 (1895).

Light earth-brown above and below, with a broad lateral stripe varying from opalescent white to pale fawn and extending from the rostrum to the apex of the elytra where it widens out indefinitely; above this stripe is a similar one of dark brown which extends along intervals 4 to 6 as far as the top of the declivity.

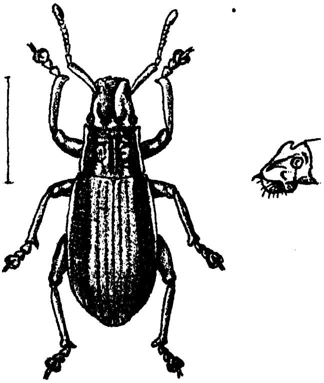

Fig. 75.—*Episomus sulcicollis*, Pasc.

Head with a very deep central furrow and a strong transverse impression on the vertex, the median costæ elevated posteriorly and forming two prominent conical tubercles. *Rostrum* as long as broad, quite parallel-sided, the central furrow narrow and very deep posteriorly, the costæ with a small basal impression.

Antennæ with dense light brown scaling, the scape almost straight; the funicle with joint 2 longer than 1, 3 evidently longer than 4, 7 shorter than the club and slightly dilated towards apex. *Prothorax* strongly transverse, subtruncate at base, apical lateral margin with a small sharp projection below the eye; upper surface with a few irregular plications, the central furrow deep, not reaching either base or apex. *Scutellum* imperceptible. *Elytra* broadly ovate, basal margin shallowly sinuate, humeral angles obsolete, subhumeral prominence very slight, apices jointly rounded; upper surface not transversely impressed near base, with narrow striæ containing rows of round deep separated punctures, the 6th stria reaching the base, the intervals broad, smooth and slightly convex, the suture scarcely elevated posteriorly, more or less sinuate before apex when viewed laterally. *Legs* with uniform light brown scaling; the tubercles on the hind tibiæ of the ♂ well developed.

♀ with the anal segment shallowly impressed.

Length, 8½–10½ mm.; breadth, 4½–5½ mm.

BURMA: Palon (*Fea*); Rangoon.

Type ♀ in the British Museum; of *E. auriculatus* at Genoa.

Genus **LACHNOTARSUS**, nov.

TYPE, *Lachnotarsus stevensi*, sp. nov.

Head separated from the rostrum by a shallow impression dorsally and by a short oblique furrow on each side at some little distance in front of the eye; eyes quite lateral, ovate and rather prominent. *Rostrum* much longer than broad, without any central furrow; the scrobes entirely visible from above, extending backwards from the apex as a deep and almost straight furrow for fully half the length of the rostrum, then becoming wide and shallow, the lower margin curving downwards as a sharp carina towards the lower edge of the eye, the upper margin straight and gradually vanishing; the epistome forming a raised semi-circular plate shallowly impressed in the middle and obtusely emarginate in front; mandibles projecting beyond the genæ, with a sharp median tooth and a somewhat prominent elevation bearing the scar, which is narrowly lanceolate; mentum trapezoidal, as long as its width in front and narrowing behind, bare, with a row of four short setæ along the anterior edge; the submentum not pedunculate and bearing two very long erect setæ. *Antennæ* with the scape reaching the anterior margin of the prothorax; the funicle without scaling, the two basal joints elongate, the remainder bead-like; the club 4-jointed, the first joint nearly as long as the rest together, their edges transverse. *Scutellum* absent. *Elytra* tuberculate, with the basal margin vertical, without humeral angles, with 10 rows of foveæ, the eighth not reaching the base, the lateral margins very shallowly sinuate above the hind coxæ. *Legs* slender, the femora clavate (the front pair rather more so than the others), unarmed, the hind pair not reaching the apex of the elytra; the tibiæ not furrowed or carinate, the front pair with a short perpendicular spine at the inner apical angle, the posterior pairs with the corbels distinctly enclosed, the cavity devoid of scaling; tarsi rather long and slender, the lower surface not spongy, but clothed with silky hairs, the third joint with the lobes narrow, the claws connate at the base; trochanters bearing a single long seta. *Sternum* with the front coxæ distinctly nearer the anterior edge of the prosternum, which is not sinuate; mesosternum with the epimeron fused with the episternum; metasternum shorter than the prominent median coxæ, the epimeron entirely and the episternum mostly hidden by the elytra, the latter with no anterior dilated piece, the episternal suture indistinct, the posterior coxæ reaching the elytra. *Venter* with the intercoxal process broadly truncate, as broad as the coxa, the two basal segments fused in the middle, segment 2 rather shorter than 3 + 4.

Range. Sikkim.

An aberrant genus, superficially resembling *Geotragus* (TANYMECINÆ).

219. **Lachnotarsus stevensi**, sp. nov.

Colour piceous, with uniform and moderately dense earth-brown scaling.

Head coarsely punctate on the vertex, the forehead transversely flattened, shallowly wrinkled and narrower than the base of the rostrum, the scales just above the eyes somewhat raised. *Rostrum* parallel-sided in the basal half and slightly dilated at the apex, the upper surface coarsely punctate and with an undulating smooth central line; behind the raised epistome is a broad impressed area which is almost impunctate and quite devoid of scaling. *Antennæ*

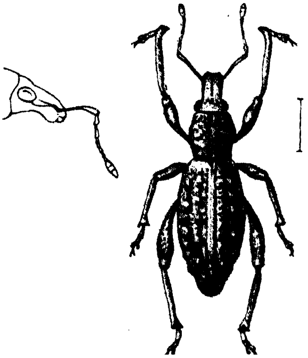

Fig. 76.—*Lachnotarsus stevensi*, Mshl.

with the scape gently curved, gradually clavate, punctate and with rather thin scaling; the funicle with joint 1 stouter and somewhat shorter than 2, and 3 slightly longer than 4, 4 to 7 about as long as broad and bead-like. *Prothorax* as long as broad, the sides rounded, broadest well before the middle, the base truncate and about as broad as the apex; the upper surface very uneven, with an indistinct central furrow and a shallow curved transverse impression before the middle; portions of the ridges bare of scaling. *Elytra* narrowly ovate (♂), broadest before the middle, the basal margin with a low sinuate elevation on each side, the apices jointly rounded; the upper surface with rather uneven rows of coarse punctures, and shallow punctate striæ along the sides, the dorsal outline flat, the posterior declivity rather steep; interval 1 with three large asymmetrical tubercles at the top of the declivity; interval 3 with five tubercles, of which four are small and one near the declivity is larger; interval 5 with four or five small tubercles; each of these tubercles is crowned with a bunch of broad scale-like setæ. *Legs* long and slender, with rather thin brown scaling, the femora with an ill-defined pale ring at the thickest part; the tibiæ with long raised scale-like setæ, the front pair with a row of 6 or 7 sharp spine-like bristles along the apical half of the inner edge.

Length, 5¾ mm.; breadth, 2 mm.

SIKKIM: Kalapokhi, 9000 ft., Nepal Frontier (*H. Stevens*).

Type ♂ in the British Museum.

I have seen only the type of this striking species.

Group II. NOTHOGNATHIDES.

This group comprises only the following new and somewhat aberrant genus.

Genus **NOTHOGNATHUS**, nov.

TYPE, *Nothognathus schoutedeni*, sp. nov.

Head exserted, transverse, the eyes comparatively small and lateral. *Rostrum* continuous with the head and rather longer than it, shallowly emarginate at the apex; the scrobes entirely dorsal, foveiform, converging dorsally, the space between them of about half the width of the forehead; the mandibles not prominent, the deciduous appendages usually retained; the mentum circular and entirely filling the posterior cavity, the submentum without any peduncle. *Antennæ* inserted near the apex of the rostrum, the scape strongly curved backwards and reaching or slightly exceeding the front margin of the thorax; the funicle 7-jointed, the two basal joints more elongate, 1 longer than 2, 3–7 subequal, transverse and closely set; the club very little broader than the funicle, short and sharply acuminate. *Prothorax* with the basal margin bisinuate, the posterior angles acutely prominent, the anterior margin obliquely truncate laterally and without ocular lobes or vibrissæ, the gular edge not sinuate. *Scutellum* distinct, subtriangular. *Elytra* suboblong, jointly sinuate at the base, the shoulders roundly rectangular, with 10 punctate striæ, the margins sinuate above the hind coxæ. *Sternum* with the anterior coxæ in the middle of the prosternum; the mesosternum with the epimeron much smaller than the episternum and reaching its front margin; the metasternum twice as long as the intermediate coxæ, its episternum narrow, the posterior coxæ reaching the elytra. *Venter* with the intercoxal process broad and ogival, segment 2 separated from 1 by a deep sinuate incision and as long as 3 and 4 together, the anal segment (of ♂?) with a large deep impression. *Legs* with clavate femora, the tibiæ nearly straight, but strongly produced internally at the apex and with a long sharp spine, the front and hind pairs also produced externally, the latter with the corbels enclosed but shallow; the tarsi narrow, scarcely spongy beneath, joint 3 not broader than the others, 2 much longer than 3, 4 elongate, the claws long and free.

Range. N. India.

Apparently the mandibular appendages are usually persistent in this genus, though the material examined is too small to enable this to be stated with certainty.

220. **Nothognathus schoutedeni**, sp. nov.

Colour red-brown, with dense brown scaling, the apical area paler from the top of the declivity.

Head with the eyes not concealed from above, the forehead simply convex. *Rostrum* narrower at the base than the forehead,

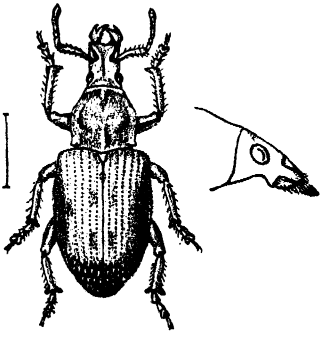

Fig. 77.—*Nothognathus schoutedeni*, Mshl.

the genæ slightly and roundly dilated, the upper surface rather uneven and with a short central furrow, the mandibular appendages long, broad and curved, terminating in two sharp points, of which the inner is the longer. *Antennæ* densely squamose and with short stiff setæ. *Prothorax* slightly longer than broad, the sides subparallel from the base to the middle, then strongly narrowed to the apex, which is slightly constricted, the upper surface finely and closely aciculate beneath the scaling and with a more or less distinct central carina. *Elytra* broadest near the shoulders and gradually narrowing behind, the intervals broad, plane and smooth, finely aciculate beneath the scaling, and with scattered short stout depressed setæ which become larger, scale-like and erect on the declivity. *Legs* with dense brownish-grey scaling and stiff erect pale setæ.

Length, 5½–7½ mm.; breadth, 2½–3½ mm.

N. INDIA (*Bacon*, *Duvaucel*). BENGAL: Pusa (Pusa Coll.).

Type in the Brussels Museum.

221. **Nothognathus varius**, sp. nov.

Colour piceous, with dense grey or brownish scaling, mottled with irregular darker spots and ill-defined paler markings.

Nearly allied in structure to *N. schoutedeni*, but differing in its much smaller size and the following particulars:—

Head with the forehead dilated laterally so as almost to conceal the eyes from above, its width therefore greater than that of the base of the rostrum. *Rostrum* proportionately shorter, the mandibular appendages very small, simple, almost straight and projecting outwardly. *Prothorax* with the sides widening from the base to the middle and without any trace of a central carina.

Length, 3–4⅛ mm.; breadth, 1½–2 mm.

N. INDIA (*Bacon*).

Type in the British Museum.

Group III. OTIORRHYNCHIDES.

This group contains only a few genera, but they are distributed over the greater part of the world. The species are all wingless and mostly dull-coloured, of medium or small size. The genus *Otiorrhynchus* enters only the Palæarctic fringe of India; over the rest of India its place is taken by *Ptochus*, the species of which will probably prove to be very numerous.

Key to the Genera.

1 (2) Rostrum separated from the head by an angulated stria; ventral segments 2, 3 and 4 subequal	CYRTOZEMIA, Pasc., p. 253.
2 (1) Rostrum continuous with the head; second ventral segment equal to or longer than the third and fourth together.	
3 (4) Intercoxal process of first ventral segment broadly truncate, broader than the hind coxæ	OTIORRHYNCHUS, Germ., [p. 255.
4 (3) Intercoxal process rounded or angulate, narrower than the hind coxæ......	PTOCHUS, Schh., p. 259.

Genus CYRTOZEMIA.

Cyrtozemia, Pascoe, Journ. Linn. Soc., Zool. xi, 1872, p. 443.

TYPE, *Cyrtozemia dispar*, Pascoe.

Head exserted, the eyes ovate, lateral and slightly prominent, the forehead narrower than the base of the rostrum. *Rostrum* separated from the head by an angulated stria, about as long as the head, the scrobes subdorsal, foveiform in front and continuing broadly and very shallowly up to the eyes, having a slight carina on each side, the apex shallowly emarginate, the mandibles slightly prominent and with a distinct scar, the mentum subquadrate and filling the buccal cavity, the submentum simply sinuate and without any peduncle. *Antennæ* elongate, slender, inserted at the apex, the scape clavate, scarcely curved, exceeding the anterior margin of the thorax; the funicle with joint 1 very long, a little longer than 2 and 3 together, 2 longer than 3, 3 longer than the others which are subequal, the club narrowly elongate, 4-jointed. *Prothorax* more or less transverse, truncate at base and apex, the gular margin not sinuate. *Scutellum* invisible. *Elytra* subtruncate at the base, without humeral angles, the margin deeply sinuate above the posterior coxæ, with 10 punctate striæ. *Sternum* with the front coxæ much nearer the anterior margin of the prosternum; the mesosternum with its side-pieces more or less fused and indistinct, the epimeron small, the median coxæ rather widely separated; the metasternum slightly longer than the median coxæ, its episternum fused with it, the hind coxæ very widely separated and touching the elytra. *Venter* with the intercoxal process very broad and truncate, segments 2, 3 and 4 subequal, the incision between 1 and 2 deep and curved. *Legs* slender, very dissimilar in the two sexes, the femora clavate, the corbels of the hind tibiæ open, the tarsi with joint 2 longer than broad, 3 broadly lobate, 4 rather longer than 1, the claws small and connate at the base.

Range. India.

222. Cyrtozemia dispar, *Pasc.*

Cyrtozemia dispar, Pascoe,* Journ. Linn. Soc., Zool., xi, 1872, p. 443, pl. x, fig. 9.

Colour black, with very fine recumbent grey pubescence, the prothorax with a narrow lateral stripe of minute whitish scales, the elytra with a similar marginal stripe reaching the 8th stria and extending from the base to behind the middle; the pubescence and scaling frequently abraded.

♂. *Head* closely punctate, the forehead shallowly impressed and with a short central furrow. *Rostrum* about as long as broad, the sides almost parallel, the genæ scarcely dilated but the margin adjoining the scrobe forming a small sharp angle, the upper surface plane or slightly impressed and with a low central carina. *Antennæ* ferruginous, with fine grey pubescence; joint 2 of the club with a deep V-shaped emargination on each side of its apical margin. *Prothorax* rather broader than long, the sides gently rounded, broadest about the middle, the upper surface evenly covered with small scattered granules, with a broad transverse impression near the apex. *Elytra* elongate, narrowly ovate, subacuminate at the apex, broadest at the middle, the striæ regular on the disk, the marginal ones strongly curved, 7 and 8 widely diverging behind the middle and enclosing an irregularly punctate space. *Legs* black with thin recumbent pubescence, the anterior trochanters sharply projecting, the femora and tibiæ clothed on their lower edges with long pale hairs, the hind femora reaching the apex of the elytra, the front tibiæ strongly curved and serrate internally, the hind pair compressed and very strongly bent, so that the inner edge of the apical half is perpendicular to the basal half, the inner edge flattened, shiny and not denticulate, the apex broadly dilated and forming two lobes, the outer one longer and bearing the tarsus at its apex.

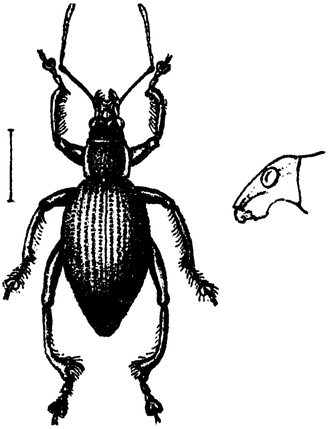

Fig. 78.—*Cyrtozemia dispar*, Pasc., ♂.

♀. Differs from the ♂ in having the prothorax more transverse and with a shallow lateral impression on each side behind the middle; the elytra are much shorter and very broadly ovate, the longitudinal curvature being much stronger; the legs lack the fringes of long hairs, the posterior femora do not reach the apex of the elytra, the tibiæ are normal, not curved or bent, and the hind pair is very finely denticulate internally; the antennæ are shorter and the emarginations of the second joint of the club very shallow.

Length, ♂ 6¼–6¾, ♀ 4¼–5¼ mm.; breadth, ♂ 3⅛–3¼, ♀ 2½–3 mm.

BOMBAY: Surat. UNITED PROVINCES: Allahabad.

Type ♂ in the British Museum.

Pascoe described only the ♂. In spite of their very different appearance I can have very little doubt that the females here described are referable to his species.

223. **Cyrtozemia cognata**, sp. nov.

Closely allied to *C. dispar*, but differing as follows:—

♂. *Head* punctured in wrinkles, the forehead flattened and not impressed, the eyes slightly more prominent. *Antennæ* with the emarginations of the second joint of the club very shallow and rounded. *Prothorax* not transversely impressed in front and with a trace of a central carina. *Elytra* more shiny and more sparsely clothed with pubescence on the disk, the lateral stripe of scaling more dense and better defined, almost confined to interval 9. *Legs* with the hind tibiæ much less strongly curved, the inner edge of the apical third forming only a wide obtuse angle with the main axis of the tibia, the inner apical angle forming only a small right-angled projection instead of a large rounded lobe; the inner surface of the tibia similarly flattened, but finely granulate on both edges.

Length, 5–5½ mm.; breadth, 2–2½ mm.

BOMBAY: Baroda.

Type ♂ in the Indian Museum.

Genus **OTIORRHYNCHUS**.

Otiorhynchus, Germar, Ins. Spec. Nov. 1824, p. 343; Lacordaire, Gen. Col. vi, 1863, p. 155.

Stomodes, Schönherr, Disp. Meth. 1826, p. 188.—Type, *S. tolutarius*, Boh.

TYPE, *Otiorhynchus rhacusensis*, Germ. (Europe).

Head with the eyes shortly oval, moderately convex, longitudinal or oblique. *Rostrum* at least as long as the head and continuous with it, subporrect, the genæ more or less dilated, the apex more or less emarginate; the scrobes subdorsal, deep and visible from above in front, gradually vanishing behind; mandibles not prominent, with a distinct scar; mentum entirely filling the buccal cavity, the submentum without any peduncle. *Antennæ* inserted at or near the apex, generally long and slender; the scape gradually clavate and reaching the prothorax; the funicle with the two basal joints more elongate, 3–7 short, obconical or bead-like, the club variable. *Prothorax* convex, rounded at the sides, truncate at the base and apex. *Scutellum* absent or very small. *Elytra* oblong-oval or subelliptical, convex, with 10, 12 or 13 striæ, shallowly sinuate at base, without any humeral callus, the lateral margin not or scarcely sinuate above the hind coxæ. *Sternum* with the front coxæ slightly nearer the anterior edge of the prosternum; the mesosternum with the epimera fused with the episterna, the latter usually separated from the central piece by a distinct suture, but sometimes fused with it; the metasternum evidently shorter than the median coxæ, the episterna more or less completely fused with it, the hind coxæ reaching the elytra. *Venter* with the intercoxal piece very broad, truncate and broader than the coxæ, segment 2 as long as or longer than 3+4 and separated from 1 by a curved incision. *Legs* with the femora strongly clavate and with or without a tooth; the tibiæ variable, the front pair generally curved at the apex, the corbels of the hind pair open or very narrowly enclosed and not ascending the dorsal edge; the tarsi with the third joint broadly lobate, the fourth elongate and the claws free.

Range. Europe, N. Africa, Central Asia, northern boundaries of India.

Key to the Species.

1 (6) Rostrum not impressed and without lateral carinæ; forehead simply punctate; prothorax not broader than long; elytra without erect setæ on the disk.
2 (3) Pronotum shiny, with fine scattered punctures; elytra with the intervals smooth and each with a single row of shallow punctures; upper surface without pubescence .... *russicus*, Stierl., p. 257.
3 (2) Pronotum dull, with close confluent punctation; elytra with the intervals coriaceous or finely rugose, without regular rows of punctures; upper surface with recumbent pubescence.
4 (5) Rostrum (without mandibles) broader than long, genæ angulate; legs ferruginous, the front tibiæ not denticulate internally; size 4–4½ mm. .... *amœnus*, Fst., p. 256.
5 (4) Rostrum as long as broad, genæ rounded; legs black or piceous, the front tibiæ finely denticulate internally; size 6–6½ mm. .... *peregrinus*, sp. n., p. 257.
6 (1) Rostrum with a broad central impression and a sharp carina on each side of it; forehead with numerous fine striæ; prothorax broader than long; elytra with rather long fine erect setæ .... *striolaticeps*, sp. n., p. 258.

224. **Otiorrhynchus amœnus**, *Fst.*

Otiorrhynchus amœnus, Faust,* Stett. Ent. Zeit. 1886, p. 139.

Colour piceous, with fairly dense long recumbent yellowish pubescence.

Head glabrous on the vertex, the forehead with rather shallow confluent punctation and a deep fovea. *Rostrum* evidently broader than long, the sides narrowed from the base to near the middle, the genæ angularly dilated, the upper surface with shallow confluent punctation and a faint central carina. *Antennæ* ferruginous, the terminal joints of the funicle bead-like and about as long as broad. *Prothorax* as long as broad, the sides moderately rounded, broadest at the middle, the upper surface with very close confluent punctation and with a smooth slightly raised central line reaching from the base nearly to the apex, the sides subgranulate. *Elytra* oval, scarcely striate, but with rows of small punctures, the intervals coriaceous and without regular punctures, the posterior declivity distinctly retuse, the pubescence long, entirely recumbent and without any raised setæ. *Legs* ferruginous, the front tibiæ not denticulate internally.

Length, 4¼ mm.; breadth, 2⅛ mm.

KASHMIR (*Stoliczka*).

Type in the Indian Museum.

225. Otiorrhynchus peregrinus, sp. nov.

Colour black, with rather thin recumbent yellowish pubescence and without raised setæ (but perhaps abraded).

Head aciculate on the vertex, the forehead with shallow confluent punctation and yellowish pubescence. *Rostrum* about as long as broad, the sides narrowed from the base to the middle, the genæ strongly and roundly dilated, the upper surface with shallow confluent punctation and an indistinct central carina in the basal half. *Antennæ* piceous, the terminal joints of the funicle longer than broad. *Prothorax* as long as broad, the sides strongly rounded, broadest rather behind the middle, the apex a little narrower than the base, the upper surface with very close small confluent punctures and with a very short and narrow smooth central line in the anterior half, with fairly dense pubescence, the sides subgranulate. *Elytra* oval, with very shallow and distinctly punctate striæ, the intervals finely shagreened, the pubescence fine and recumbent, without raised setæ. *Legs* piceous, with the femora blackish, the front tibiæ rather strongly denticulate internally.

Length, 6½ mm.; breadth, 3¾ mm.

BALUCHISTAN: Kaha Pass.

Type ♀ in the British Museum.

In Mr. H. E. Andrewes's collection there is an example from Kashmir (apparently a ♂) in which the elytra are rather narrower and have suberect setæ on the declivity; the prothorax is less closely punctured and the smooth central line is broken and longer.

226. Otiorrhynchus russicus, *Stierl.*

Otiorrhynchus russicus, Stierlin, Mittheil. Schweiz. Ent. Ges. vi 1883, p. 544.

Colour shining black, with sparse minute setæ, the anterior margin of the prothorax piceous.

Head with the vertex glabrous, the forehead coarsely punctate and with a shallow central fovea. *Rostrum* slightly broader than long, the sides diverging almost from the base, the genæ broadly and roundly prominent, the upper surface slightly convex, coarsely punctate in wrinkles and without any carinæ. *Antennæ* ferruginous; the funicle with joints 6 and 7 strongly transverse. *Prothorax* as long as broad, the sides strongly rounded, broadest at the middle, the upper surface smooth, shiny and with scattered fine punctures, the punctation much closer and coarser at the sides, the setæ minute, scattered and depressed. *Elytra* oval, not striate but with regular rows of small punctures, the intervals almost glabrous and each with a single row of faint punctures which bear short depressed setæ. *Legs* ferruginous, the front tibiæ finely denticulate.

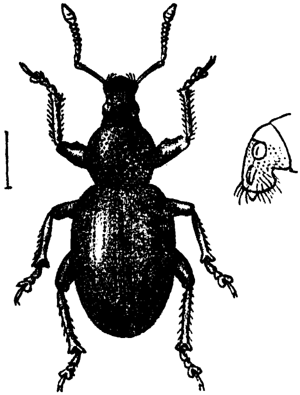

Fig. 79.—*Otiorrhynchus russicus*, Stierl.

Length, $4\frac{3}{4}$ mm.; breadth, $2\frac{1}{2}$ mm.

KASHMIR: Sirikol (*Stoliczka*). RUSSIA: Tschaar-Tasch, 11,000 ft.

Type not traced.

227. **Otiorrhynchus striolaticeps**, sp. nov.

Colour shiny black, without pubescence, but with fine erect setæ.

Head aciculate on the vertex, the forehead flattened and with numerous fine longitudinal striæ, the eyes subdepressed. *Rostrum* about as long as broad, the sides strongly narrowed from the base to beyond the middle, the genæ less dilated than usual, the upper surface with a broad and deep longitudinal impression bounded on each side by a sharp carina and containing a distinct central carina, the impression striolate at the base but almost glabrous in front. *Antennæ* piceous, the terminal joints of the funicle longer than broad. *Prothorax* broader than long, the sides moderately rounded, broadest at the middle, the apical margin vertically truncate at the sides, the upper surface with large close and deep punctures, and without any smooth central space, the setæ very short but erect. *Elytra* oval, with shallow distinctly punctured striæ, the intervals entirely glabrous and shiny, with long fine erect white setæ. *Legs* black, with the last joint of the tarsi piceous, the front tibiæ not denticulate internally.

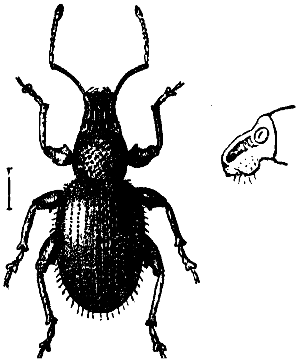

Fig. 80.—*Otiorrhynchus striolaticeps*, Mshl.

Length, $3\frac{1}{2}$–$3\frac{3}{4}$ mm.; breadth, $1\frac{3}{4}$–$1\frac{7}{8}$ mm.

KASHMIR: Sonamarg (*T. R. D. Bell*).

Type in the British Museum.

Genus **PTOCHUS**.

Ptochus, Schönherr, Disp. Meth. 1826, p. 187; Lacordaire, Gen. Col. vi, 1863, p. 188.

TYPE, *Ptochus porcellus*, Boh.

Head with the forehead generally broad, the eyes lateral or subdorsal, more or less convex. *Rostrum* very stout, longer than the head and continuous with it, the base broader than the forehead, the apex with a triangular impression, the genæ dilated or not; the scrobes generally short, deep, apical and subdorsal, sometimes entirely dorsal; the mandibles and mentum as in *Otiorrhynchus*. *Antennæ* elongate, the scape curved at the base, gradually clavate at the apex, reaching nearly to the middle of the prothorax; the funicle variable. *Prothorax* variable in shape, truncate at the base and apex, the gular margin not sinuate. *Scutellum* present or not. *Elytra* generally truncate at the base, of variable shape, the sides rounded, without any humeral callus, the lateral margin not sinuate, the apices jointly rounded. *Sternum*, *venter* and *legs* as in *Otiorrhynchus*, except that the intercoxal process of the abdomen is much narrower, almost rounded in front and hardly as broad as the coxæ.

Range. Europe, Siberia, Persia, India, Ceylon, China and Japan.

Lacordaire includes this genus in his group PERITELIDES, on the ground that the claws are connate. But in the type species, as well as all the Indian forms, the claws are free.

Ptochus tigrinus, Redt., has a well-developed post-ocular lobe to the prothorax and must be referred to the genus *Heteroptochus*, Fst., in the subfamily EREMNINÆ.

*Key to the Species.**

1	(2)	Femora without any tooth; upper surface with dull green scaling; prothorax narrower at apex than at base; elytra with erect setæ	*horridulus*, Fst., p. 262.
2	(1)	Femora with a small tooth; scaling grey or brown above.	
3	(8)	Prothorax narrower at apex than at base; elytra with erect setæ.	
4	(7)	Eyes dorsal, so that both sides of the head can be seen from above at the same time.	
5	(6)	Central dorsal area of rostrum widened behind, at its base as broad as the forehead in ♀; prothorax with erect setæ; elytra widest behind middle. .	*pyriformis*, sp. n., p. 263.
6	(5)	Central dorsal area of rostrum parallel-sided, at its base much narrower than the forehead in ♀; prothorax with recumbent setæ; elytra widest at middle	*strabo*, sp. n., p. 263.
7	(4)	Eyes lateral	*imbellis*, sp. n., p. 264.
8	(3)	Prothorax not narrower at apex than at base.	
9	(40)	The intervals on the elytra regular, even and without tubercles.	
10	(21)	Funicle with the two basal joints evidently unequal.	
11	(20)	Funicle with joint 1 longer than 2.	
12	(15)	Rostrum about as long as broad, dilated at the apex and with a distinct carina on each side above the scrobe.	
13	(14)	Prothorax with the base and apex of equal width; elytra with very short recumbent setæ	*ovulum*, Fst., p. 265.
14	(13)	Prothorax slightly narrower at the base than at the apex: elytra with rather long erect setæ	*limbatus*, sp. n., p. 270.

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* *Ptochus* (?) *crinitus*, Redt., is not included in this key.

15 (12) Rostrum much broader than long, not dilated at the apex nor carinate laterally.
16 (19) Head finely striolate; forehead broader than the space between the scrobes.
17 (18) Elytra with short erect setæ; terminal joints of funicle bead-like .... *afflictus*, Fst., p. 265.
18 (17) Elytra with very short recumbent setæ; terminal joints of funicle evidently longer than broad ...... *lapsus*, sp. n., p. 267.
19 (16) Head simply punctate; forehead not broader than the space between the scrobes .... *concinnus*, sp. n., p. 266.
20 (11) Funicle with joint 2 much longer than 1; rostrum strongly transverse, not dilated at the apex, nor carinate laterally; prothorax nearly twice as broad as long and almost parallel-sided; the elytra with very short recumbent setæ.................. *brevicollis*, sp. n., p. 267.
21 (10) Funicle with the two basal joints equal or subequal.
22 (31) Scutellum invisible.
23 (26) Scape with stiff erect setæ; prothorax broadest before the middle and strongly narrowed behind, with a distinct rounded impression on each side behind the middle; eyes almost plane.
24 (25) Rostrum as long as broad; prothorax a little narrower at the base than at the apex; elytra with the base broader than that of the prothorax. . *apicatus*, sp. n., p. 268.
25 (24) Rostrum a little broader than long; prothorax with the base and apex of equal width; base of the elytra slightly broader than that of the prothorax .... *adjunctus*, sp. n., p. 269.
26 (23) Scape with recumbent setæ; prothorax broadest at the middle and only slightly narrowed behind, without dorsal impressions.
27 (28) Rostrum as long as broad, strongly narrowed from the base to the middle and dilated again at the apex. *assamensis*, sp. n., p. 269.
28 (27) Rostrum evidently broader than long, and slightly narrowed from base to apex, the sides straight.
29 (30) Mandibles reddish yellow with the apices broadly black; setæ on the elytra curved, subrecumbent; size 2⅓ mm. .... *pusio*, sp. n., p. 269.
30 (29) Mandibles entirely black; setæ on the elytra straight and obliquely raised; size 4 mm...................... *napæus*, sp. n., p. 270.
31 (22) Scutellum distinct.
32 (37) Rostrum dilated at the apex.

33 (36) Elytra with erect setæ.

34 (35) Rostrum with the dorsal carinæ feeble; terminal joints of antennæ much longer than broad; prothorax not narrower at base than at apex .. *noxius*, Fst., p. 271.

35 (34) Rostrum with distinct dorsal carinæ; terminal joints of antennæ only slightly longer than broad; prothorax slightly narrower at base than at apex .... *limbatus*, sp. n., p. 270.

36 (33) Elytra with minute recumbent setæ .. *brachyderoides*, Desbr., [p. 272.

37 (32) Rostrum not dilated at the apex; prothorax transverse and without dorsal impressions.

38 (39) Eyes lateral and convex, the forehead twice as broad as the length of the eye; prothorax strongly transverse, only slightly longer than the head (without rostrum)................ *percussus*, Fst., p. 272.

39 (38). Eyes subdorsal, almost plane, the forehead as broad as the length of the eye; prothorax slightly transverse, much longer than the head .... *planoculis*, sp. n , p. 273.

40 (9) The dorsal intervals on the elytra irregular and with low ridges and tubercles; scutellum present; eyes dorsal, the forehead not broader than the width of the eye .... *nodulosus*, Fst., p. 273.

228. **Ptochus horridulus**, *Fst.*

Ptochus horridulus, Faust,* Deut. Ent. Zeit. 1897, p. 354.

Colour black, with uniform dense dull green scaling.

Head with the eyes lateral and only slightly convex, the forehead with no central stria. *Rostrum* comparatively narrow, as long as broad, not dilated at the apex, the sides almost straight and parallel, the upper surface without carinæ and with a shallow

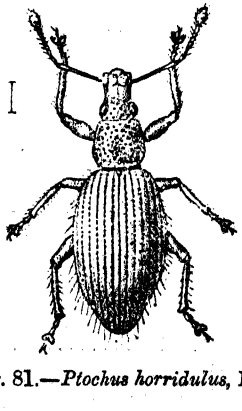

Fig. 81.—*Ptochus horridulus*, Fst.

fine central stria. *Antennæ* ferruginous, with the funicle darker, joint 1 of the latter evidently longer than 2, 3–7 subequal, short and bead-like, the club shortly ovate. *Prothorax* slightly broader than long, the sides rounded, broadest behind the middle, the apex narrower than the base, the scattered punctation scarcely visible through the scaling. *Scutellum* invisible. *Elytra* narrowly elliptical, shallowly sinuate at the base, the longitudinal curvature almost flat anteriorly, the fine punctate striæ bare of scaling, the intervals with long white erect setæ. *Legs* piceous, with green and grey scaling, the femora without any tooth.

Length, 2–2¾ mm.; breadth, ⅞–1⅛ mm.

BOMBAY: Belgaum (*H. E. Andrewes*).

Type in the Dresden Museum.

229. **Ptochus pyriformis**, sp. nov.

Piceous, with uniform dense grey scaling.

Head with the eyes dorsal and moderately convex, the forehead broadly impressed, with a central fovea and with stout erect setæ, at its narrowest only a little broader than the space between the scrobes or the length of the eye. *Rostrum* rather broader than long, narrowed from the base to the middle and scarcely dilated at the apex; the scrobes approximated, entirely dorsal; the central dorsal area narrow, with its lateral margins sharply defined, slightly dilated behind and about as broad as each of the lateral areas as seen from above, shallowly impressed and with a fine central carina; the carina bounding the epistome unusually high. *Antennæ* ferruginous, the two basal joints of the funicle subequal, the remainder bead-like and only slightly longer than broad. *Prothorax* broader than long, the apex much narrower than the base, the sides roundly dilated rather behind the middle, the basal margin shallowly bisinuate, the apex gently rounded dorsally, the upper surface with coarse separated punctures, which are not hidden by the scaling, each containing a stout erect seta. *Scutellum* small, but distinct. *Elytra* pear-shaped, its sides at the base forming an almost continuous line with those of the prothorax, the greatest width well behind the middle and broadly rounded posteriorly, the shallow punctate striæ almost devoid of scaling, the intervals broad and smooth, bearing numerous stout long erect bristles, mostly bifid at the tip.

Length, 3¾ mm.; breadth, 2 mm.

CEYLON: Anuradhapura (*Dr. W. Horn*).

Type in the British Museum.

Its pyriform shape and subdorsal eyes give this species a quite distinctive facies.

230. **Ptochus strabo**, sp. nov.

Colour black, with rather thin brownish-grey scaling.

Head finely punctate, not striolate, the forehead with an elongate central fovea (sometimes hidden by scaling) and not (♂)

or distinctly (♀) broader than the space between the scrobes; eyes only slightly convex, sufficiently dorsal in position that both sides of the head can be seen at the same time from above. *Rostrum* broader than long, the sides almost straight and subparallel, the genæ not dilated, the upper surface tricarinate and only shallowly impressed in the middle, the central dorsal area parallel-sided and a little narrower than the lateral areas as seen from above, the scrobes entirely dorsal and approximated. *Antennæ* long, black, the scape gently curved and with recumbent setæ; the funicle with joint 1 longer than 2, the remainder distinctly longer than broad. *Prothorax* transverse, the base slightly bisinuate and broader than the apex, the sides gently rounded, broadest at the middle, the upper surface rather strongly convex, with large and fairly close punctures throughout. *Scutellum* minute. *Elytra* ovate, broadest about the middle and acuminate behind, the basal margin sinuate; the shallow striæ contain rows of comparatively large punctures, but these are mainly hidden when the scaling is intact, and the striæ then appear quite narrow; interval 1 slightly raised along the suture, the others almost flat and set with fairly long erect pale setæ.

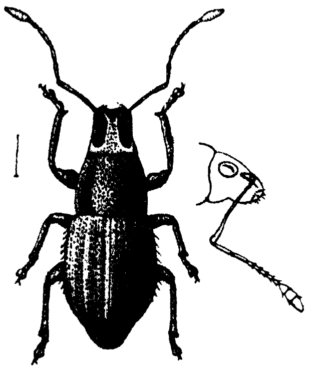

Fig. 82.—*Ptochus strabo*, Mshl.

Length, 3½–4½ mm.; breadth, 1¾–2¼ mm.

MADRAS: Nilgiri Hills (*H. L. Andrewes*).

Types ♂ ♀ in the British Museum.

231. **Ptochus imbellis**, sp. nov.

Piceous, with dense greyish-brown scaling.

Head with the eyes lateral and strongly convex, the forehead almost plane, finely striolate beneath the scaling, nearly twice as broad as the space between the scrobes. *Rostrum* almost as long as broad, strongly narrowed from the base to beyond the middle, the genæ slightly dilated, the scrobes subdorsal and somewhat approximated; the central dorsal area not well defined, the lateral carinæ rapidly disappearing behind the antennæ, shallowly impressed near the apex and with a narrow central carina throughout. *Antennæ* piceous, the two basal joints of the funicle subequal, the remainder bead-like and scarcely longer than broad. *Prothorax* about 1½ times as broad as long, the sides rounded, broadest at the middle and distinctly constricted near the apex, the basal margin gently rounded and broader than the apex, which is truncate dorsally, the upper surface with the sculpture hidden by the scaling and set with stiff short erect setæ. *Scutellum* not apparent. *Elytra* shortly and broadly ovate, the greatest width about the middle, rather broadly rounded behind, the shallow punctate striæ partially obscured by the scaling, the intervals broad and almost plane, with short stout erect setæ.

Length, 3¾ mm.; breadth, 2¼ mm.

MADRAS: Hadagalli, on pulse (*E. Ballard*).

Type in the British Museum.

232. **Ptochus ovulum**, *Fst.*

Ptochus ovulum, Faust,* Deut. Ent. Zeit. 1897, p. 353.

Colour black, with uniform pale fawn scaling above and below.

Head with fine close shallow punctation beneath the scaling, the forehead with a central furrow, the eyes subdorsal, nearly circular and moderately convex. *Rostrum* about as long as broad, the sides gradually narrowed from the base to the middle, evidently dilated at the apex, impressed above, shallowly punctate, with a deep central furrow and a distinct lateral carina on each side. *Antennæ* dark ferruginous; the funicle with joint 1 nearly twice as long as 2, 3–7 longer than broad, the club elongate. *Prothorax* about as long as broad, the sides rounded, broadest before the middle, evidently narrowed behind, the base and apex of equal width, the upper surface with coarse punctation which is partly visible through the scaling. *Scutellum* present, but very small. *Elytra* ovate, subtruncate at the base, broadest about the middle, the longitudinal curvature very convex, the striæ deeply punctate when abraded, the intervals with very short and strongly depressed setæ.

Length, 3¾–4 mm.; breadth, 1¾–2 mm.

MADRAS: Madura (*C. Somers Smith*).

Type in the Dresden Museum.

233. **Ptochus afflictus**, *Fst.*

Ptochus afflictus, Faust,* Stett. Ent. Zeit. 1886, p. 141.

Colour piceous, with uniform brownish-grey scaling.

Head finely striolate, the forehead broader than the space between the scrobes, the eyes lateral, round, small and very convex. *Rostrum* broader than long, slightly narrowed from the base to the middle, not dilated at the apex, plane above, with fine longitudinal striolæ and without carinæ. *Antennæ* ferruginous; the funicle with joint 1 longer than 2, 3-7 bead-like, the club elongate. *Prothorax* broader than long, the sides very slightly rounded, broadest at the middle, the apex and base of equal width, the upper surface with very coarse confluent punctation. *Scutellum* present, but very small. *Elytra* rather broadly ovate, truncate at the base, the longitudinal curvature moderate, the striæ deep and punctate when denuded, the intervals with short erect pale setæ.

Length, 3¼ mm.; breadth, 1½ mm.

PUNJAB: Murree (*Stoliczka*).

Type in the Dresden Museum.

234. **Ptochus concinnus**, sp. nov.

Piceous, with dense scaling varying from grey to dark buff; the prothorax with a distinct dark lateral stripe and below it a pale stripe, which is lighter than the disk and is continued back on to the elytra; at the base of the elytra the intervals are alternately slightly darker and lighter.

Head with the eyes quite lateral and moderately convex, the forehead convex, shallowly punctate beneath the scaling, very broad, but not broader than the space between the scrobes. *Rostrum* much broader than long, slightly narrowed from base to apex, the sides almost straight; the scrobes sublateral, very widely separated and not at all convergent; the central dorsal area very broad, almost flat, parallel-sided, its lateral margins angulated but not carinate, with a very fine central carina which is hidden by the scaling. *Antennæ* piceous, the club paler; the funicle with joint 1 evidently longer and stouter than 2, the remainder subquadrate. *Prothorax* nearly twice as broad as long, the sides moderately rounded, broadest about the middle, the basal margin truncate and scarcely narrower than the apical, which is slightly sinuate; the scaling on the disk not sufficiently

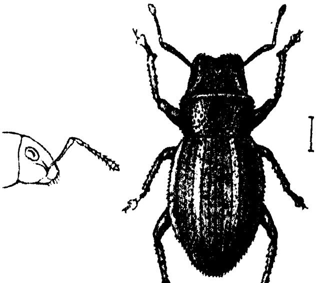

Fig. 83.—*Ptochus concinnus*, Mshl.

dense to hide the sheen of the integument, but concealing the shallow separated punctures, the subrecumbent spatulate setæ all directed forwards. *Scutellum* distinct and shiny. *Elytra* ovate, jointly truncate at the base, obtusely acuminate behind, broadest about the middle, the shallow striæ strongly punctate at the base, the punctures diminishing behind and more or less hidden by the scaling, the intervals broad, plane and indistinctly punctate, the setæ short, spatulate and slightly raised.

Length, 2¾–3½ mm.; breadth, 1¼–1¾ mm.

MADRAS: Coimbatore, on grass (*E. Ballard*).

Types ♂ ♀ in the British Museum.

235. **Ptochus lapsus**, sp. nov.

Colour black, with dense light brown scaling, the under-parts paler, the prothorax with an ill-defined darker lateral stripe.

Head finely striolate, the forehead without any impression or fovea, evidently broader than the space between the scrobes, the width of the latter scarcely greater than the length of the eye; eyes lateral, slightly longer than broad and moderately convex. *Rostrum* much broader than long, slightly narrowed from base to apex, the sides almost straight, the genæ not dilated, the upper surface without carinæ, gently convex in the basal half and broadly impressed near the apex; the carina bounding the epistome overhanging the mandibles at its apex. *Antennæ* elongate, the scape reaching the middle of the prothorax; the funicle with joint 1 much longer than 2, the remainder subequal and longer than broad, the club very slender. *Prothorax* twice as broad as long, the apex and base of equal width, the sides moderately rounded, broadest at the middle, the basal margin almost truncate, the apical broadly sinuate, the upper surface closely and evenly punctate, but appearing quite smooth when the scaling is intact. *Scutellum* minute. *Elytra* ovate, rather obtuse behind, broadest about the middle, the basal margin sinuate, the striæ shallow, with large punctures which are partly concealed by the scaling, the intervals flat, with very short recumbent setæ.

Length, 3½ mm.; breadth, 1¾ mm.

MADRAS: Gooty, Anantapur dist. (*T. V. Ramakrishna*—Pusa Coll.).

Type in the British Museum.

There are a few very short, separated, white hairs on the anterior margin of the prothorax, representing vibrissæ; but in spite of this it seems preferable to retain the species in this genus, with which it conforms in all other respects.

236. **Ptochus brevicollis**, sp. nov.

Colour black, with brownish scaling above, turning to greyish on the sides and under-parts.

Head very broad and closely punctate, the forehead broader than the space between the scrobes, the width of this space much greater than the length of the eye; the eyes quite lateral, shortly ovate and moderately convex. *Rostrum* much broader than long, slightly narrowed from the base to the middle, but not dilated at the apex, the upper surface almost plane, with a short central stria and a fine rather indistinct lateral carina on each side. *Antennæ* piceous brown, the scape not reaching the middle of the prothorax; the funicle with joint 2 much longer than 1, 5–7 equal and about as long as broad, 3 and 4 slightly longer. *Prothorax* nearly twice as broad as long, the sides almost straight and parallel, the apex and base of equal width, the upper surface with close deep punctation throughout. *Scutellum* distinct. *Elytra* ovate, truncate at the base, broadest at the middle, the dorsal curvature only slight in front, the striæ shallow, but with deep punctures when denuded, the intervals with very short depressed setæ.

Length, 4¼–4½ mm.; breadth, 2⅜–2½ mm.

BENGAL: Chota Nagpur (*Cardon*).

Type in the British Museum.

237. **Ptochus apicatus**, sp. nov.

Colour piceous, with dark grey scaling variegated with vague darker markings.

Head almost glabrous beneath the scaling, the forehead much broader than the length of the eye and with a faint central stria, the eyes sublateral, nearly touching the front margin of the prothorax, very short, ovate and almost plane. *Rostrum* about as long as broad, a little narrowed from the base to the middle and slightly dilated at the apex, plane above, with a short central and two lateral carinæ on each side, all partly hidden by the scaling. *Antennæ* dull ferruginous, the two basal joints of the funicle equal, 3–7 short and bead-like, the club elongate. *Prothorax* broader than long, the sides rounded, broadest before the middle, strongly narrowed behind, so that the base is a little narrower than the apex, with coarse punctation which is partly visible through the scaling, and with a large fovea on each side behind the middle. *Scutellum* invisible. *Elytra* subglobose and abruptly acuminate behind, truncate at the base, broadest before the middle, the longitudinal curvature very convex, the striæ rather deep and distinctly punctate, the intervals with rather sparse short stiff erect setæ. *Legs* piceous, the tarsi paler, with thin grey scaling and short erect setæ.

Length, 2¾–3¼ mm.; breadth, 1½–1¾ mm.

SIKKIM: Mungphu (*Atkinson*—type); Darjiling, 6000–7000 ft. (*C. A. Paiva*—Ind. Mus.); Phubsering, Lebong, 5000 ft. (*H. M. Lefroy*—Pusa Coll.).

Type in the British Museum.

238. **Ptochus adjunctus**, sp. nov.

Colour black, with dull fawn scaling and vague greyish markings on the elytra.

Closely allied to *P. apicatus*, from which it differs as follows:—

Head with the eyes and forehead very slightly more convex. *Rostrum* a little broader than long and scarcely dilated at the apex. *Prothorax* with the sides more strongly rounded, the base and apex of equal width. *Elytra* ovate, much broader at the base, the sides less strongly rounded, the longitudinal curvature much less convex.

Length, 3¼–3½ mm.; breadth, 1⅞–2 mm.

BURMA: Ruby Mines (*Doherty*).

Type in the British Museum.

239. **Ptochus assamensis**, sp. nov.

Colour black, with thin greenish-grey scaling.

Head broad, the eyes lateral, small and convex, the forehead finely striolate. *Rostrum* as long as broad, strongly narrowed from the base to the middle and dilated again at the apex, the upper surface shallowly impressed and tricarinate, striolate at the base. *Antennæ* piceous; the funicle with the two basal joints equal, 3–7 subequal and a little longer than broad. *Prothorax* much broader than long, the sides distinctly rounded, broadest at the middle, the apex and base of equal width, the upper surface with close and finely rugose punctation, almost hidden by the scaling, and with a faint central carina. *Scutellum* invisible. *Elytra* ovate, subtruncate at the base, broadest at the middle, with deeply punctate striæ, the intervals slightly convex and with very short sparse curved setæ.

Length, 3–3¼ mm.; breadth, 1¾–2 mm.

ASSAM.

Type in the British Museum.

240. **Ptochus pusio**, sp. nov.

Piceous, with dense pale grey scaling, more or less mottled with buff and a few dark brown scales.

Head with the eyes small, lateral and very convex, the forehead convex, finely striolate beneath the scaling, very broad, broader than the space between the scrobes; mandibles reddish yellow with the apices broadly black. *Rostrum* much broader than long, slightly narrowed from base to apex, the sides quite straight; the scrobes sublateral, widely separated and only slightly convergent, the central dorsal area consequently broad, without any distinct lateral carinæ, shallowly impressed in the middle and with a faint central carina. *Antennæ* slender, testaceous, the two basal joints of the funicle subequal, the remainder longer than broad. *Prothorax* very short, nearly double as broad as long, the sides moderately rounded, broadest at the middle, with a distinct constriction near the base, the basal margin truncate and slightly narrower than the apical, which is also truncate; the sculpture of the upper surface quite hidden by the almost overlapping scales, the setæ short, scale-like, subrecumbent and all directed forwards. *Scutellum* indistinguishable. *Elytra* ovate, broadest rather before the middle, jointly truncate at the base, the narrow punctate striæ partly concealed by the scaling, the intervals broad and plane, the setæ short, scale-like and subrecumbent.

Length, 2½ mm.; breadth, 1⅓–1½ mm.

MADRAS: Yemmiganur, Bellary dist. (*E. Ballard*).

Type in the British Museum.

241. **Ptochus napæus**, sp. nov.

Black, with buff-coloured scaling, variegated on the elytra with a few white and brown scales, the prothorax with a narrow central stripe of white scales.

Head with the eyes small, lateral and moderately convex, the forehead finely striolate beneath the scaling, convex and very broad, much broader than the space between the scrobes. *Rostrum* much broader than long, slightly narrowed from base to apex, the sides straight; the scrobes subdorsal, rather widely separated, but convergent; the central dorsal area not well defined, the lateral carinæ converging behind, but disappearing before the middle, with a shallow median impression in front and a fine central carina, which is more or less hidden by the scaling. *Antennæ* piceous, the scape rather more abruptly clavate than usual, the funicle with the two basal joints subequal, the remainder slightly broader than long. *Prothorax* much broader than long, the sides rounded, broadest at the middle, scarcely constricted in front, the base truncate and about as broad as the apex, which is also truncate; the scales overlapping so as to hide the integument and the coarse punctation, the spatulate setæ slightly raised. *Scutellum* invisible. *Elytra* ovate, jointly truncate at the base, obtusely acuminate behind, broadest at the middle, the shallow punctate striæ almost hidden by the scaling, the intervals broad and almost flat, the setæ white, spatulate and obliquely raised.

Length, 4 mm.; breadth, 2 mm.

MADRAS: Adoni, Bellary dist. (*E. Ballard*).

Type in the British Museum.

242. **Ptochus limbatus**, sp. nov.

Colour piceous, the upper surface with dense brown scaling more or less mottled with pale patches, especially in the ♀; the lower surface with uniform pale green or greenish-grey scaling, forming a well-defined lateral stripe on the head and thorax, reaching stria 6 on the basal half of the elytra and extending irregularly inwards behind the middle.

Head finely striolate beneath the scaling, the eyes large, sublateral and convex. *Rostrum* about as long as broad, gradually narrowed from the base to beyond the middle and evidently dilated at the apex, shallowly impressed above and with three narrow carinæ. *Antennæ* ferruginous; the funicle with joint 1 longer than, 2, 3 and 4 subequal and longer than the rest, which are a little longer than broad, the club elongate. *Prothorax* about as broad as or slightly broader than long, the sides slightly rounded, broadest at the middle, shallowly constricted in front and distinctly narrowed behind, so that the base is slightly narrower than the apex, the upper surface with a shallow transverse impression before and behind the middle, the coarse punctation partly visible through the scaling. *Scutellum* distinct, clothed with green scaling. *Elytra* narrowly elliptical in ♂ and considerably wider in ♀, truncate at the base, broadest at the middle, the longitudinal curvature rather flat, the striæ moderately deep and punctate, but appearing very fine where the scaling is intact, the intervals with rather long, scattered, erect setæ.

Length, 3–4¼ mm.; breadth, 1–1⅝ mm.

CEYLON: Horton Plains, 6000 ft. (type), Bogawantalawa, 4900–5200 ft., and Nuwara Eliya, 6200–8000 ft. (*G. Lewis*); Pattipola (Ind. Mus.).

Type ♂ in the British Museum.

In some of the Nuwara Eliya specimens the first joint of the funicle is scarcely longer than the second, but the distinction is not locally constant, nor does it appear to be correlated with any other differences.

243. **Ptochus noxius**, *Fst.*

Ptochus noxius, Faust,* Deut. Ent. Zeit. 1897, p. 353.

Colour piceous or black, with uniform dark grey scaling.

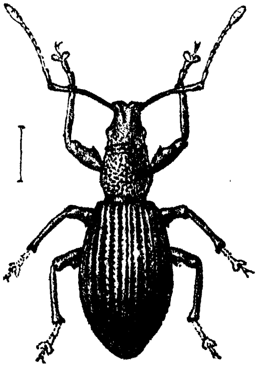

Fig. 84.—*Ptochus noxius*, Fst.

Head with fine rugose punctation, the eyes lateral, large, shortly ovate and not very convex. *Rostrum* about as long as broad, narrowed from the base to the middle and dilated at the apex, the upper surface shallowly impressed and with an indistinct carina on each side. *Antennæ* piceous; the funicle with joint 1 only slightly longer than 2, 3-6 subequal and longer than broad, 7 rather longer, the club elongate. *Prothorax* about as long as broad, the sides rounded in the middle, and shallowly constricted before and behind, the base and apex of equal width, the upper surface with coarse confluent punctation, with a shallow transverse impression before the middle and a faint rounded impression on each side behind the middle, so that the median part appears slightly elevated towards the sides. *Scutellum* distinct. *Elytra* ovate, truncate at the base, broadest behind the middle, the longitudinal curvature flat in front, the striæ deep and punctate when denuded, the intervals with numerous short erect setæ.

Length, 4–5 mm.; breadth, 2–2½ mm.

PUNJAB: Dalhousie (*C. Somers Smith*); Simla; Kangra (*C. E. K. Pechell*).

Type in the Dresden Museum.

244. **Ptochus brachyderoides**, *Desbr.*

Myllocerus brachyderoides, Desbrochers des Loges,* C. R. Soc. Ent. Belgique, 1891, p. ccclvii.
Synolobus brachyderoides, Faust, Stett. Ent. Zeit. 1894, p. 359.

Colour piceous, with fine brownish scaling, the elytra bearing small indistinct pale spots.

Head with a deep central fovea, the eyes subdorsal and only slightly convex, the forehead a little broader than the width of the eye. *Rostrum* about as long as broad, narrowed from the base to the middle and evidently dilated in front, broadly impressed above and with a distinct carina on each side. *Antennæ* piceous; the two basal joints of the funicle subequal, joints 3 to 7 about equal in length and distinctly longer than broad. *Prothorax* a little broader than long, the sides rounded in the middle, shallowly constricted before and behind, the apex and base of equal width, the upper surface with close confluent punctation. *Scutellum* present, but small. *Elytra* jointly sinuate at the base, broadest behind the middle, the dorsal outline rather strongly and evenly curved, the striæ somewhat deeply punctate, the intervals slightly convex and with minute depressed setæ.

Length, 5 mm.; breadth, 2⅝ mm.

BENGAL: Konbir (*Cardon*).

Type in Coll. Desbrochers des Loges.

245. **Ptochus percussus**, *Fst.*

Ptochus percussus, Faust,* Stett. Ent. Zeit. 1886, p. 140.

Colour black, with thin grey scaling.

Head finely striolate, eyes sublateral, large, circular and moderately convex. *Rostrum* rather broader than long, the sides narrowing from the base to the middle, not dilated at the apex, shallowly impressed above, finely striolate and without distinct carinæ. *Antennæ* piceous; the funicle with the two basal joints equal, 4–6 short and subequal, 3 and 7 a little longer, the club elongate. *Prothorax* strongly transverse, the sides slightly rounded, broadest about the middle, the base scarcely narrower than the apex, the upper surface coarsely punctate throughout. *Scutellum* present, but small. *Elytra* ovate, truncate at the base, broadest about the middle, the longitudinal curvature moderate, the striæ fine and shallow when abraded, the intervals with very short sparse erect setæ.

Length, 3½–4 mm.; breadth, 1½–2 mm.

PUNJAB: Murree (*Stoliczka*).

Type in the Indian Museum.

246. **Ptochus planoculis**, sp. nov.

Colour black, with uniform light earth-brown scaling.

Head with the eyes subdorsal (so that the external margins of both can be seen at the same time from above), almost plane and about as long as the width of the forehead. *Rostrum* broader than long, slightly narrowed from base to apex, the genæ not dilated, the upper surface plane, with a very fine central carina and a lateral one adjoining the scrobe. *Antennæ* piceous; the funicle with joints 1 and 2 subequal, 3, 4 and 7 about equal, 5 and 6 a little shorter. *Prothorax* transverse, the apex and base of about equal width, the sides very slightly rounded; the upper surface with large close punctures, which are almost hidden by the scaling. *Scutellum* distinct. *Elytra* broadly ovate, truncate at the base and acuminate behind, broadest about the middle, the longitudinal curvature very convex, the striæ apparently fine, but deep and strongly punctate when denuded, the intervals with stiff erect setæ.

Length, 3 mm.; breadth, 1½ mm.

CEYLON (*Thwaites*).

Type in the Brussels Museum.

247. **Ptochus nodulosus**, *Fst.*

Cyphicerus nodulosus, Faust,* Deut. Ent. Zeit. 1897, p. 376.

Colour piceous brown, rather thinly clothed with minute yellowish-grey scales, having sometimes a slightly brassy reflexion.

Head with a broad and deep central furrow, the forehead not broader than the eye, the latter dorsal, broadly ovate and only slightly convex. *Rostrum* broader than long, evidently narrowed from the base to the middle, slightly and roundly dilated at the apex, the upper surface with a well-defined carina running to the inner edge of each eye, the space between these broadly impressed and containing a faint carina; in front of the eye a large flattened depression. *Antennæ* with the two basal joints of the funicle equal, joints 3–7 subequal and elongate. *Prothorax* transverse, the apex and base of equal width, the sides rounded and broadest before the middle, slightly sinuate near the base, the apical margin almost vertically truncate at the sides, with close confluent punctation above and a rounded impression on each side behind the middle. *Scutellum* very small. *Elytra* with the base truncate and very broad, so that the basal angles project beyond the prothorax and form false shoulders; the striæ rather broad and with large deep punctures, the intervals comparatively narrow and convex, the dorsal ones uneven and more or less elevated, the elevations on intervals 3, 5 and 6 broken up into long low tubercles, interval 7 carinate at the base and the suture slightly elevated on the declivity; the setæ extremely short and inconspicuous. *Legs* piceous brown (the tarsi lighter) with thin pale scaling, the femora almost bare on the basal half and with a stout tooth, the front tibiæ bisinuate internally.

Length, 4-5½ mm.; breadth, 2-3 mm.

MADRAS: Cuddapah (*Rev. T. Campbell*); Madura (*C. Somers Smith*). BOMBAY: N. Kanara (*T. R. D. Bell*), Belgaum (*H. E. Andrewes*). BURMA: Taung-ngu and Tharrawaddy (*Corbett*).

Types ♂ ♀ in the Dresden Museum.

I am quite unable to agree with Faust in regarding this species as a *Cyphicerus*, because, in the first place, the prothorax has neither ocular lobes nor vibrissæ, and secondly, the wings are entirely absent and the elytra have not a true shoulder.

248. **Ptochus (?) crinitus**, *Redt.*

Omias crinitus, Redtenbacher, Hügel's Kaschmir, iv, pt. 2, 1848, p. 547.

"Very similar to *O. rotundatus* in facies, but three times as large, and readily distinguished from it by the rugosely granulato-punctate prothorax, the apically pointed elytra, etc. *Head* broad, the eyes moderately prominent, the forehead flat and closely wrinkled longitudinally, as is also the slightly narrower rostrum. *Antennæ* reddish pitch-brown. *Prothorax* much broader than long, truncate at base and apex, the sides slightly rounded, rugosely granulato-punctate above. *Scutellum* invisible. *Elytra* globular-ovate, jointly acuminate at the apex, deeply punctato-striate, with large transverse punctures and smooth shiny intervals; the upper surface with very small and extremely sparse silvery scales, which are somewhat denser towards the apex, the intervals with rows of fine erect setæ. *Underside* black, with very sparse setæ. *Legs* reddish piceous, the femora with a very small tooth."

Length, 4 mm.

KASHMIR (*von Hügel*).

Type missing.

The late Dr. Ganglbauer was unable to trace the type of this species in the Vienna Museum collection. The description does not agree with any of the forms known to me, but the species seems to be allied to *P. afflictus*, Fst.

The following species cannot be placed:—

249. **Peritelus imbricatis**, *Mots.*

Peritelus imbricatis, Motschulsky, Bull. Soc. Imp. Nat. Mosc. xxxix, pt. 1, 1866, p. 430.

"Of the same shape as *Perit. necessarius*, but smaller. Elongato-subovate, convex, black, with dense silky pubescence, the forehead with a median impressed longitudinal line; thorax with three faint stripes; elytra oblong, deeply punctato-striate, the intervals pilose, with imbricated grey spots, the suture and sides paler."

Length, 3 mm.; breadth, 2 mm.

CEYLON: Colombo.

It is impossible to identify the species from this description, and all that can be said is that it is highly improbable that it will prove to be really a *Peritelus*; it is more likely to be a *Ptochus*.

Group IV. TRACHYPHLŒIDES.

This widely distributed group contains but few genera and species, but this is probably due to the fact that they have been neglected by collectors. The species are purely terrestrial in their habits, and are all of small size and obscurely coloured, being frequently covered with an earthy incrustation.

Key to the Genera.

1 (2) Rostrum not emarginate at apex; eye included in the scrobe; femora not toothed .... TRACHYPHLŒOSOMA, Woll., [p. 275.
2 (1) Rostrum distinctly emarginate at apex; scrobe terminating in front of the eye; femora with a small tooth .... TRACHYODES, g. n., p. 277.

Genus **TRACHYPHLŒOSOMA.**

Trachyphlœosoma, Wollaston, Ann. Mag. Nat. Hist. (4) iv, 1869, p. 414.

Trachyphlœops, Roeloffs, Ann. Soc. Ent. Belg. xvi, 1873, p. 165.—Type, *T. roeloffsi*, Sharp.

TYPE, *Trachyphlœosoma setosum*, Woll.

Head broad, the eyes quite lateral, almost circular, small and moderately convex. *Rostrum* longer than the head and continuous with it, about as long as broad, not emarginate at the apex, the epistome transverse, without any limiting carina; the scrobe broadly widened behind, continued deeply right up to the eye, which lies between its upper and lower margins; mandibles rather prominent and with a distinct scar; the mentum large and circular, the submentum not pedunculate. *Antennæ* inserted near the apex of the rostrum; the scape just reaching the anterior margin of the thorax, curved, more or less dilated in the apical half and with short erect setæ; the funicle with joint 1 broader and longer than 2, which is only a little longer than 3, 3–7 short, bead-like and closely set, the club broadly ovate. *Prothorax* broader than long, the sides rounded, truncate at base and apex, the apical margin oblique at the sides, the gular margin not sinuate. *Scutellum* invisible. *Elytra* jointly sinuate at the base, the shoulders rounded and without any humeral tubercle, the apices jointly rounded, the lateral margins not sinuate. *Venter* with the intercoxal process rounded and nearly as broad as the coxæ, which reach the elytra, segment 2 longer than 3+4 and separated from 1 by a curved incision. *Legs* rather slender, the femora without a tooth; the two anterior pairs of tibiæ with a small internal apical spine, the front pair sinuate internally, the hind pair with the corbels open and the external apical angle produced; the tarsi with joint 3 broadly lobate, 4 rather short, the claws free.

Range. Southern India, Japan and St. Helena.

Dr. Sharp has already pointed out the identity of *Trachyphlœops* with *Trachyphlœosoma* (Tr. Ent. Soc. London, 1896, p. 92), and it even appears to me doubtful whether the Japanese form is specifically different from that found in St. Helena. The Indian species is, however, quite distinct. It is probable that the genus will be found to occur in Africa also.

250. **Trachyphlœosoma alternatum**, sp. nov.

Colour black, with dense brown scaling mottled with faint darker markings.

Head finely rugose and with a narrow central stria, but the sculpture normally hidden beneath the scaling. *Rostrum* with the sides straight and gradually narrowed from base to apex, the upper surface with a shallow longitudinal impression, the scrobes posteriorly as broad as the eye. *Antennæ* piceous, with the scape gradually thickened to the apex. *Prothorax* rather broader than

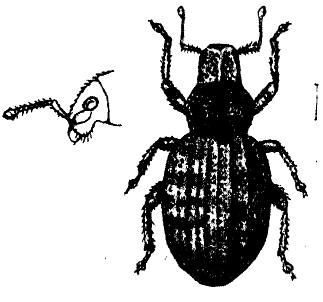

Fig. 85.—*Trachyphlœosoma alternatum*, Mshl.

long, the sides strongly rounded, broadest before the middle, the upper surface with indistinct low granulation, densely covered with scaling and with very short erect setæ. *Elytra* oblong-ovate, the dorsal outline plane from the base to behind the middle and not very steeply declivous behind; the upper surface with broad striæ containing large deep punctures, the intervals narrow and subcostate, the alternate ones being slightly more raised, the setæ short and subdepressed. *Legs* piceous, with suberect pale setæ, the femora without a tooth.

Length, 3½ mm.; breadth, 2–2⅛ mm.

MADRAS: Nilgiri Hills, 6000 ft. (*H. L. Andrewes*).

Type in the British Museum.

Genus **TRACHYODES**, nov.

TYPE, *Trachyodes horrescens*, sp. nov.

Very closely allied to *Trachyphlœosoma*, Woll., from which it differs only in the following characters:—*Rostrum* not narrowed in front, the sides subparallel or even slightly widened towards the apex, which is distinctly emarginate, the epistome being bounded by an angulated carina; the scrobes narrow, almost parallel-sided, slightly curved and continued right up to the anterior margin of the eye, their posterior portion being much narrower than the eye. *Legs* with a distinct small tooth on the femora.

Range. S. India.

251. **Trachyodes horrescens**, sp. nov.

Colour ferruginous brown, with dense brownish scaling.

Head convex, without perceptible sculpturing and set with short, very stiff, erect bristles. *Rostrum* with the sides straight and subparallel, the upper surface almost plane, the scrobes posteriorly much narrower than the eye. *Antennæ* piceous, the scape strongly curved and abruptly and broadly thickened in the apical half. *Prothorax* distinctly transverse, the sides moderately

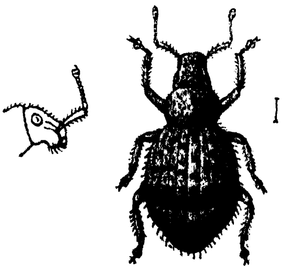

Fig. 86.—*Trachyodes horrescens*, Mshl.

rounded, broadest about the middle, with rugose punctation which is hidden by the dense scaling, and with short, thick, erect bristles. *Elytra* very broadly ovate, the dorsal outline distinctly curved, the posterior declivity steep, with narrow striæ containing very faint punctures which are quite invisible through the scaling; the intervals much broader than the striæ, slightly convex and evenly raised; the setæ long, stout and erect. *Legs* ferruginous brown, with stiff, erect pale setæ, the femora with a small tooth.

Length, 2¼–2½ mm.; breadth, 1¼–1½ mm.

MADRAS: Nilgiri Hills (*Sir G. Hampson*, *H. L. Andrewes*).

Type in the British Museum.

Group V. PHYLLOBIIDES.

The members of this group are all comparatively small insects which, in the adult stage, feed on the leaves of trees or shrubs, a fair proportion of them being ornamented with more or less metallic green scaling. In the few species of which the early stages are known the larvæ are subterranean in their habits.

The group is well represented in India both as regards genera and species, this being apparently the head-quarters of the genus *Myllocerus*, the southern representative of *Phyllobius*.

Key to the Genera.

1 (4) Tarsal claws fused together at base; femoral tooth at the middle of the femur.
2 (3) Apex of rostrum broadly emarginate, the scrobes narrow and curving outwards .... CATORYGMA, g. n., p. 279.
3 (2) Apex of rostrum not emarginate, the scrobes broad and curving inwards. AMPHORYGMA, g. n., [p. 281.
4 (1) Tarsal claws free.
5 (6) Anterior pairs of tibiæ finely serrate externally, the middle pair strongly curved; femoral tooth at the middle of the femur .... EPICALUS, Mots., p. 282.
6 (5) Tibiæ not serrate externally, the middle pair not curved; femoral tooth beyond the middle, when present.
7 (8) Prothorax with a long sickle-shaped lateral process curving backwards. DREPANODERES, Wtrh., [p. 284.
8 (7) Sides of prothorax normal.
9 (20) Rostrum emarginate at the apex.
10 (11) Apical emargination of rostrum asymmetrical, the left gena projecting further than the right; front coxæ close to anterior margin of prosternum .... EMPERORRHINUS, Mshl., [p. 286.

11 (10) Apical emargination of rostrum symmetrical.
12 (19) Epistome bounded behind by a distinct carina; scrobes dorsal, broad; front coxæ almost in middle of prosternum.
13 (18) Femora dentate.
14 (15) Scape not exceeding the front margin of the thorax .... BRACHYCAULUS, g. n., [p. 287.
15 (14) Scape extending beyond the front margin of the thorax.
16 (17) Upper surface of the rostrum apparently produced on to the forehead in the form of a broad, abruptly truncate plate .... STELORRHINUS, g. n., [p. 289.
17 (16) Rostrum continuous with the head . MYLLOCERUS, Schh., [p. 291.
18 (13) Femora simple .... HYPERSTYLUS, Roel., [p. 352.
19 (12) Epistome without any limiting carina; scrobes sublateral, short and narrow; front coxæ quite close to anterior margin of prosternum . ARRHINES, Schh., p. 355.
20 (9) Rostrum not emarginate at the apex. HOLORRHYNCHUS, g. n., [p. 359.

Faust has also included in the PHYLLOBIIDES the purely Indian genus *Brachyxystus*, Fst. (Deut. Ent. Zeit. 1897, p. 355), but in the classification here adopted it cannot be retained in this group on account of the very different structure of the mouth-parts, for the submentum has a distinct peduncle and the maxillæ and their palpi are fully exposed, while the mandibles show no trace of a scar. It must, therefore, be transferred to the PHANEROGNATHI, being nearly related to *Canonopsis*, Wtrh., of the group ECTEMNORRHINIDES, all the other members of which are wingless and confined to Kerguelen or other islands in the Southern Ocean.

Genus **CATORYGMA**, nov.

TYPE, *Catorygma curvipes*, sp. nov.

Head very broad, its greadest width (including the eyes) as broad as or slightly broader than the greatest width of the prothorax; the eyes quite lateral, ovate, comparatively small and distinctly convex. *Rostrum* longer than the head and continuous with it, broader than long, its base as wide as the forehead, parallel-sided, with a broad rounded emargination at the apex; scrobes rather narrow, lateral, curved outwardly, directed towards the eye but not reaching it; the mentum very small and circular, the submentum not pedunculate. *Antennæ* short and stout, the scape only just reaching the front margin of the prothorax, curved, strongly dilated to the apex and set with stiff erect bristles; the funicle with joint 1 a little longer and broader than 2, 2 longer than 3, 3–7 subequal, transverse and closely set; the club ovate. *Prothorax* really truncate at the base, though seemingly bisinuate when pressed close to the elytra, the apex truncate and slightly oblique at the sides, the gular margin not sinuate. *Scutellum* present, small and circular. *Elytra* separately rounded at the base, the apices jointly rounded, the shoulders distinct and much broader than the prothorax, the dorsal outline convex and steeply declivous behind. *Sternum* with the coxæ in the middle of the prosternum; mesosternum with the side-pieces hardly visible through the scaling; metasternum a little longer than the median coxæ, the episternum narrow, the suture indistinct, the hind coxæ not quite reaching the elytra. *Venter* with the intercoxal process narrow and rounded, much narrower than the coxæ, segment 2 longer than 3 + 4 and separated from 1 by a curved incision. *Legs* with the femora clavate, with a small sharp tooth at the middle and constricted near the apex; the two anterior pairs of tibiæ strongly curved and produced internally at the apex, the hind pair straight, its corbels open, apical, and not ascending the dorsal edge; the tarsi short, joint 3 broadly lobate, 4 short, the claws minute and connate at the base.

Range. Southern India.

252. **Catorygma curvipes**, sp. nov.

Colour black, with sandy scaling and dark brown markings; the prothorax brown on the disk and pale laterally; the elytra with the brown markings more conspicuous on the disk and sometimes forming three irregular transverse bands.

Head with the forehead very broad, convex and with short stiff erect bristles. *Rostrum* almost plane above, very faintly carinate in the middle and at the sides. *Prothorax* almost cylindrical, the sides slightly rounded and broadest before the middle, the apex and base of equal width; the upper surface with fine rugose sculpturing, which is hidden by the scaling, and with two faint shallow impressions on each side. *Elytra* parallel-sided from the shoulders to behind the middle in the ♂, dilated behind the middle in the ♀, with deep shallowly punctate striæ which appear

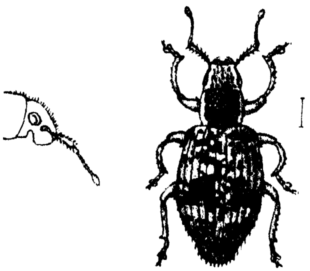

Fig. 87.—*Catorygma curvipes*, Mshl., ♀.

narrow and impunctate when the scaling is intact, the intervals broad and smooth, the dorsal ones with single rows of short stiff erect bristles. *Legs* piceous or ferruginous, with dense pale scaling.

Length, 2–3 mm.; breadth, 1–1½ mm.

MADRAS: Ouchterlony Valley, 2500–3000 ft., Nilgiri Hills (*H. L. Andrewes*, *Capt. A. K. W. Downing*); Teppukadu, 2500 ft., Nilgiris (*Andrewes*).

Type ♀ in the British Museum.

Genus **AMPHORYGMA**, nov.

TYPE, *Amphorygma nilgirensis*, sp. nov.

Allied to *Catorygma*, Mshl., and differing only in the following respects:—

Head not very broad, narrower than the widest part of the prothorax; the eyes subdorsal, much closer together, comparatively large and only slightly convex. *Rostrum* roundly dilated towards the apex, which is not emarginate; the scrobes broad, dorsal and curving inwards.

Range. Southern India, Ceylon.

A noticeable feature of these two genera is the low position of the femoral tooth.

253. **Amphorygma nilgirensis**, sp. nov.

Colour black, with dense brownish-grey scaling and vague darker markings on the disk of the elytra.

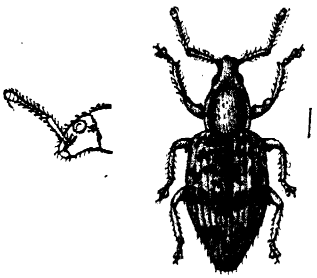

Fig. 88.—*Amphorygma nilgirensis*, Mshl.

Head with the forehead broader than the space between the scrobes, almost plane and with very short erect setæ. *Rostrum* almost as long as broad, with a shallow longitudinal impression above and a narrow carina along the inner edge of the scrobe. *Antennæ* with joint 1 of the funicle a little longer and thicker than 2, the remaining joints subequal and transverse. *Prothorax* about as long as broad, subcylindrical, the sides slightly rounded, broadest about the middle, the apex a little narrower than the base, the sculpturing of the upper surface hidden by the scaling, but with a distinct rounded impression on each side behind the middle. *Elytra* with the sides slightly dilated behind the middle, with narrow punctate striæ, the punctures not visible through the scaling, the intervals broader than the striæ, slightly convex and each with a row of short erect spatulate bristles. *Legs* piceous brown or ferruginous, with dense brownish scaling, the front tibiæ almost straight.

Length, 2¼–2¾ mm.; breadth, 1–1¼ mm.

MADRAS: Nilgiri Hills (*H. L. Andrewes*).

Type in the British Museum.

254. **Amphorygma ceylonensis**, sp. nov.

Superficially very similar in appearance to *A. nilgirensis*, but differing as follows:—

Head with the forehead more convex. *Rostrum* distinctly broader than long, the dorsal impression deeper and the lateral carinæ therefore appearing more prominent, the posterior half of the scrobe bare (densely clothed with scales in *A. nilgirensis*). *Antennæ* with the funicle longer and more slender, joint 2 slightly longer than 1, the remaining joints subequal and about as long as broad, the club a little more pointed. *Prothorax* broader than long, the sides more strongly rounded, broadest before the middle, the basal constriction deeper, so that the base is but little broader than the apex, a shallow transverse impression before the middle, but no round lateral impressions. *Elytra* much less rounded at the base, almost truncate, the setæ stout but cylindrical. *Legs* with the anterior pairs of tibiæ distinctly curved.

Length, 2½ mm.; breadth, 1⅛ mm.

CEYLON: Bogawantalawa, 4900–5200 ft. (*G. Lewis*).

Type in the British Museum.

Genus EPICALUS.

Epicalus, Motschulsky, Étud. Ent. vii, 1858, p. 90; Lacordaire, Gen. Col. vi, 1863, p. 218.

TYPE, *Epicalus virgatus*, Mots.

Head with the eyes moderately convex, large, oval, lateral and oblique. *Rostrum* deflected, continuous with the head, broader than the forehead at its base, the dorsal portion compressed and elevated, the apical margin truncate; the scrobes dorsal and foveiform; the mandibles rather prominent, the scar being indistinct; the mentum completely filling its cavity and on a level with the submentum which has no peduncle. *Antennæ* inserted about the middle of the rostrum; the scape elongate, reaching nearly the middle of the prothorax, curved near the base and rather gradually clavate; the funicle with the two basal joints elongate and equal, the remainder subequal and a little longer than broad, the club rather short and ovate. *Prothorax* subcylindrical, bisinuate at the base, obliquely truncate at the apex. *Scutellum* minute. *Elytra* much broader than the thorax at the shoulders, which are roundly rectangular, with 10 striæ, the dorsal outline flat, the posterior declivity very steep, the lateral margin not sinuate. *Sternum* with the anterior coxæ in the middle of the prosternum, the metasternal episterna distinct. *Venter* with segment 2 equal to 3 + 4 and separated from 1 by a curved suture. *Legs* with the femora rather stout and having a small sharp tooth in the middle, the anterior pairs of tibiæ curved, sharply produced internally at the apex and with the external edges finely serrate, the hind pair with the corbels open, the tarsal claws free.

Range. Burma and Ceylon.

The external serration of the tibiæ is a most unusual character in the family.

255. Epicalus virgatus, *Mots.*

Epicalus virgatus, Motschulsky, Étud. Ent. vii, 1858, p. 90.

Colour piceous, the head and rostrum with green scaling; the prothorax with a broad light brown dorsal stripe, edged with a narrower dark brown stripe, the sides and under-parts pale metallic green; the elytra similarly coloured, being light brown in the middle of the disk, with a darker stripe (variegated with paler spots) on intervals 4–6 in the basal half, but approaching nearer the suture behind, the green marginal stripe sharply limited to stria 6 in the basal half, then abruptly extending to stria 4 and sometimes spreading behind over the entire declivity.

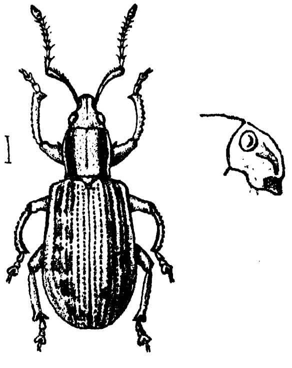

Fig. 89.—*Epicalus virgatus*, Mots.

Head with a faint central stria, the forehead narrowing rapidly in front. *Rostrum* as long as the head, slightly widened near the apex, the narrowed dorsal area quite plane and smooth. *Antennæ* reddish brown, the scape with short erect setæ. *Prothorax* subcylindrical, the sides very slightly rounded, broadest at the middle, the apex scarcely narrower than the base, the rugose punctation of the upper surface almost concealed by the scaling. *Elytra* separately rounded at the base, the striæ distinctly punctate, the intervals rather convex and the alternate ones a little more raised, the setæ very short, sparse and depressed. *Legs* light reddish brown, with thin pale scaling.

Length, 2¾ mm.; breadth, 1 mm.

CEYLON. BURMA.

Type destroyed.

Genus DREPANODERES.

Drepanoderes, Waterhouse, Trans. Ent. Soc. (2) ii, 1852, p. 186; Lacordaire, Gen. Col. vi, 1863, p. 215.

TYPE, *Drepanoderes viridifasciatus*, Waterh.

Head with the eyes large, oval, lateral and moderately convex. *Rostrum* continuous with the head and about equal to it in length, the base much broader than the forehead, the apical emargination rather shallow and obtusely angulate; otherwise as in *Myllocerus*, except that the scrobes are more lateral in position. *Antennæ* inserted right at the apex of the rostrum; the scape strongly curved, gradually thickened and exceeding the front margin of the thorax; the funicle with the two basal joints elongate, 2 evidently longer than 1, 3–7 subequal and longer than broad, the club 4-jointed and narrowly ovate. *Prothorax* very transverse, the sides produced into a broad sickle-shaped process curving backwards into a sharp point, the anterior margin vertically truncate and a little narrower than the base, which is shallowly bisinuate, the gular margin slightly sinuate. *Scutellum* small, but distinct. *Elytra* oblong-ovate, much broader than the base of the thorax at the shoulders, which are sharply angulate, the longitudinal curvature moderately convex and steeply declivous behind, with 10 striæ, the lateral margin slightly sinuate above the hind coxæ. *Sternum* with the front coxæ in the middle of the prosternum; the mesosternum with the epimera large, but evidently smaller than the episterna; the metasternum much longer than the median coxæ, the episterna distinct and fairly broad, the hind coxæ not reaching the elytra. *Venter* and *legs* as in *Myllocerus*, but the femora with only a single small tooth.

Range. India.

Lacordaire has erroneously given the genus *Pollendera*, Motschulsky, as a synonym of *Drepanoderes*; it is, however, quite a distinct genus and belongs to the subfamily EREMNINÆ.

256. Drepanoderes viridifasciatus, *Wtrh.*

Drepanoderes viridifasciatus, Waterhouse,* Trans. Ent. Soc. (2) ii, 1852, p. 186; Lacordaire, Gen. Col. pl. 65, fig. 2.
Drepanoderes fuscus, Waterhouse,* l. c. p. 187.

Colour piceous, with or without metallic green markings; when the green scaling is present the head and prothorax are green, the latter with a broad denuded central stripe and a narrower lateral one, the edges of the lateral process being also bare; the elytra with 5 or 6 irregular transverse green bands which reach neither suture nor margin and a green apical patch, but sometimes the markings are absent on the disk so that there is only a longitudinal green stripe mostly along the intervals 5 and 6.

Head almost impunctate, with a short frontal stria. *Rostrum* a little longer than the head, about as long as broad, parallel-sided at the base and slightly dilated at the apex, almost plane above and with a fine central carina. *Antennæ* flavous. *Prothorax* much shorter than its width at the base, the width from point to point of the broad sickle-shaped lateral processes being as broad as the greatest width of the elytra, the upper surface with close shallow punctation. *Elytra* jointly sinuate at the base, the shoulders sharply rectangular, the sides subparallel to beyond the middle, punctato-striate, the intervals with short suberect pale setæ. *Legs* flavous, the femora usually with some green scaling towards the apex.

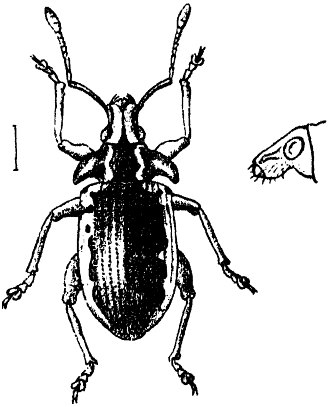

Fig. 90.—*Drepanoderes viridifasciatus*, Wtrh.

Length, 4–4¾ mm.; breadth, 1¾–2¼ mm.

BOMBAY: Igatpuri.

Type in the British Museum; also the type of *D. fuscus*.

In *D. fuscus* the green scales are entirely absent, except just behind the eye. It is not quite clear whether these examples represent a real colour variation, or are merely abraded.

Genus **EMPERORRHINUS.**

Emperorrhinus, Marshall, Bull. Ent. Research, vi, pt. 4, 1916, p. 365.

TYPE, *Emperorrhinus defoliator*, Mshl.

Rostrum stout, longer than the head and continuous with it; the mandibles very unequal, the left being much the larger and projecting (when closed) considerably beyond the genæ; in conformity with this, the left gena is also more developed and projects further beyond the scrobe than does the right one, the rounded apical excision of the rostrum being therefore asymmetrical; the scrobes dorsal and apical, short and curving abruptly inwards, so that the space between them is scarcely half the width of the forehead; the process covering the condyle of the antenna convex, testaceous and shiny, superficially appearing as though it might be the condyle itself; mentum small, subcircular and bearing a transverse row of four bristles. *Antennæ* long and slender, the scape curved and reaching the middle of the prothorax, the two basal joints of the funicle elongate, the remainder longer than broad. *Prothorax* truncate at the base, the anterior margin laterally sloping backwards from above downwards; the anterior coxæ quite close to the front of the prosternum. *Elytra* much broader than the prothorax and with prominent shoulders. *Abdomen* with the intercoxal process ogival, segment 2 slightly longer than 3 and 4 and separated from 1 by a deeply sinuate incision. *Legs* slender, all the femora with a single small tooth, the corbels of the posterior tibiæ open, the tarsal claws free.

Range. Northern India.

This genus is nearly related to *Myllocerus*, with which it agrees in most characters, but it should readily be distinguished by the remarkable asymmetry of the rostrum, a character which I have never previously observed in any adelognathous Curculionid. Other points which distinguish the genus from *Myllocerus* are, the projection of the closed mandibles well beyond the apices of the genæ and the proximity of the front coxæ to the anterior margin of the prosternum.

257. **Emperorrhinus defoliator**, *Mshl.*

Emperorrhinus defoliator, Marshall, op. cit. p. 366, fig. 1.

Black, densely clothed with mingled black and bright metallic green scaling; head and rostrum green; prothorax green, with a broad central black stripe; elytra variable, but with the green and black scaling fairly equally distributed in alternating small subquadrate patches on the dorsal intervals; there is often a somewhat large black patch near the base on intervals 3 to 6, and occasionally the black scales greatly predominate.

Head finely striolate longitudinally, the forehead twice as broad as the space between the scrobes, the eyes moderately convex. *Rostrum* with the left side (excluding the mandible) somewhat shorter than the basal width, distinctly narrowed from the base to apex, the sides being almost straight; the interscrobal area almost plane, finely striolate beneath the scaling, and with a fine central carina in the anterior part. *Antennæ* reddish brown; the funicle with the two basal joints subequal, or the first very slightly longer, the remaining five subequal and much longer than broad. *Prothorax* transverse, truncate at base and apex, which are of equal width, the sides rounded only in the middle, markedly constricted in front and behind; the dorsum rather uneven, without any central furrow or carina, the somewhat rugose punctures normally hidden by the scaling, the setæ suberect and all directed forwards. *Elytra* much broader than the prothorax at the shoulders, which are rounded rectangular, parallel-sided in the male and slightly dilated behind the middle in the female, the apices jointly rounded, and the dorsal outline only slightly convex; the shallow striæ not hidden by the scaling and containing shallow punctures, the intervals almost plane, shining and impunctate; the scales small, convex and subcircular, the green ones for the most part contiguous, the black more sparse, so that the shining surface is partly visible; the setæ slender, long, dark and erect. *Legs* red-brown, the femora darker, with recumbent pale setæ and scattered green scales.

Length, $2\frac{1}{2}$–$3\frac{1}{2}$ mm.; breadth, $1\frac{1}{4}$–$1\frac{1}{2}$ mm.

PUNJAB: Chawai, Kulu, Kangra district (*type*). SIKKIM: Kurseong, 6000 ft. (*E. A. D'Abreu*); Darjiling (*Harmand*). ASSAM: Khasi Hills (*teste H. E. Andrewes*).

Type in the British Museum.

This species superficially resembles such small *Myllocerus* as *M. dorsatus*, F., and *M. pretiosus*, Fst., but may be readily distinguished by the abnormal structure of the rostrum. I have examined 36 specimens.

Mr. C. F. C. Beeson, Imperial Forest Zoologist, Dehra Dun, records this species as defoliating various kinds of fruit trees, such as pears, peaches, cherries, etc. Mr. T. Bainbrigge Fletcher states that the correspondent from whom he received his specimens informed him that the weevils first appeared on an alder tree (*Alnus nitida*) in a field adjoining his orchard. After completely defoliating the alder, they attacked his peach trees, and then turned their attention to the apricots and pears, apples being the last trees to be touched. The whole orchard was defoliated.

Genus **BRACHYCAULUS**, nov.

TYPE, *Brachycaulus posticalis*, sp. nov.

Head with the eyes lateral or sublateral, the forehead broad and continuous with the rostrum. *Rostrum* broad, longer than the head, with a rather shallow rounded emargination at the apex; the scrobes dorsal, short and broad; the mentum small, with a transverse row of four setæ. *Antennæ* with the scape only just reaching the front margin of the thorax, stout, slightly curved and gradually thickened; the funicle with the two basal joints subequal, 3 a little longer than broad, the remainder as long as broad; the club moderately broad, spindle-shaped. *Elytra* with prominent rounded shoulders and ten punctate striæ. *Sternum*: the front coxæ about in the middle of the prosternum; the mesepimeron with the posterior side of the triangle a trifle longer than the outer one; the metepisternum almost parallel-sided behind the dilated head. *Venter* with segment 2 longer than 3 and 4 together. *Legs* short, the femora moderately clavate and with a short sharp tooth beyond the middle, but not so near the apex as in *Myllocerus*; tibiæ straight or moderately curved, with a short apical mucro, corbels of hind pair open and terminal; tarsi as in *Myllocerus*.

Range. Burma.

258. **Brachycaulus posticalis**, sp. nov.

Colour black, with dense sandy grey scaling; the prothorax with an ill-defined lateral brown stripe on each side, which is continued vaguely on to the base of the elytra; the latter with a very broad, common, dark brown, chevron-shaped marking behind the middle, extending on each side as far as the sixth stria and with its posterior edge forming a sharp angulation on the second stria, the apical area whitish grey.

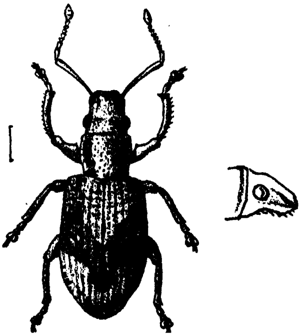

Fig. 91.—*Brachycaulus posticalis*, Mshl.

Head broad, longitudinally striolate beneath the scaling; the eyes entirely lateral, very short oval, small and slightly prominent, the forehead evidently broader than the space between the scrobes and nearly three times as broad as the eye. *Rostrum* broader than long, a little longer than the head, its base nearly as wide as the head behind the eyes, the sides straight and gradually narrowing to the apex, the emargination very shallow and broadly rounded, the upper surface almost plane and without distinct carinæ. *Antennæ* red-brown, with dense pale scaling, the scape set with short stiff erect setæ, the funicle with pale narrow scales. *Prothorax* a little broader than long, the sides almost parallel from the apex to the middle and then sharply narrowed to the base, the latter strongly bisinuate, the apical margin very oblique laterally; on each side near the base a short longitudinal lateral carina separating two impressions of which the upper is the deeper, the dorsal outline sloping from apex to base. *Elytra* separately rounded at the base, the shoulders rather sloping and forming a rounded obtuse angle, the sides slightly dilated behind the middle, the striæ deep, the punctation indistinct, the setæ short and subdepressed; the scutellum with whitish scaling. *Legs* red-brown, with dense pale scaling, the tibiæ rather strongly curved and with erect white setæ.

Length, 3 mm.; breadth, 1½ mm.

BURMA: Mergui (*Doherty*).

Type ♀ in the British Museum.

259. **Brachycaulus personatus**, sp. nov.

Colour black, with brownish scaling, the elytra with a faint darker chevron-shaped marking behind the middle, the posterior margin of which is almost straight, followed by a greyish-white apical patch.

Nearly allied to *B. posticalis* and differing as follows:—

Head with the forehead narrower, about twice as broad as the eye. *Rostrum* longer, evidently narrower at the base than the head behind the eyes and slightly dilated at the apex. *Antennæ* with the scape more curved, more strongly clavate, and the erect setæ longer. *Prothorax* with the sides more rounded in the middle, the basal margin less deeply bisinuate. *Elytra* much less strongly rounded at the base, the striæ finer and shallower; the scales smaller, not overlapping and less strongly fluted, the scale-like setæ much longer and more erect; the scutellum with dark scaling. *Legs* with the tibiæ almost straight.

Length, 3 mm.; breadth, 1½ mm.

BURMA: Ruby Mines (*Doherty*).

Type ♀ in the British Museum.

Genus **STELORRHINUS**, nov.

TYPE, *Myllocerus carinirostris*, Mshl.

Head with a broad flat raised area on the forehead, abruptly truncate behind and appearing as if formed by a plate-like extension of the upper surface of the rostrum, the vertex on a much lower level; the eyes large, sublateral. *Rostrum* rather strongly dilated at the apex, the epistome with a very deep acute-angled emargination and the limiting carina very prominent; the posterior edge of the scrobes on a level with the angle of the epistome, narrow and curved in front, and ending behind in a deep rounded fovea; the buccal aperture oblique, the mandibles pincer-like and with distinct scars, the mentum with a transverse row of four setæ. *Antennæ* stout, the scape curved in the basal third, only slightly broadened at the apex and reaching beyond the middle of the prothorax; the funicle with joint 2 much longer than 1, 3 and 4 subequal, 5 and 6 shorter and subequal, 7 shorter and narrower than 6; the club spindle-shaped. *Sternum* with the front coxæ nearly in the middle of the prosternum; epimeron of the mesosternum rather long and narrow, of the two outer sides the hind one is markedly longer than the anterior one; the scaled portion of the metepisternum very narrow in the middle. *Legs*: the femora not very strongly clavate, with a small narrow sharp tooth; all the tibiæ straight, the posterior pairs with a short inconspicuous spine at the inner apical angle, the corbels of the hind pair open; tarsi with the second joint subtriangular, almost as long as the third, the claws free.

Range. Assam, Burma.

Distinguished from *Myllocerus*, Schh., by the structure of the head, the small seventh funicular joint, and the presence of four setæ on the mentum.

260. **Stelorrhinus carinirostris**, *Mshl.*

Myllocerus carinirostris, Marshall, Ann. Mag. Nat. Hist. (8) xii, 1913, p. 184; Stebbing, Indian Forest Insects, 1914, p. 401.

Colour black or chestnut-brown, with brown and green or white scaling; the sides and under-parts pale metallic green or whitish; the prothorax dark brown above with two narrow green or white stripes; the elytra indistinctly striped, the intervals 2, 4 and 6 being brown, the alternate intervals rather paler and more or less irrorated with green scales, especially at the base of 3

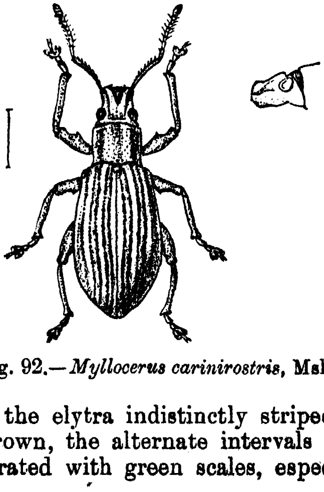

Fig. 92.—*Myllocerus carinirostris*, Mshl.

Head with the frontal plate slightly narrowed behind, the sides not reaching the eye margins, broadly truncate at its base and terminating abruptly so as to form a transverse furrow between the eyes; the latter widely separated and almost circular. *Rostrum* about as long as broad, longer than the head, somewhat dilated at the apex, the raised dorsal area depressed in the middle, with a short low central carina, the lateral carinæ elevated far above the upper margin of the eyes and forming an angular prominence above the insertion of the antennæ. *Antennæ* stout, the scape with dense brown scaling and numerous long broad subrecumbent setæ; joint 1 of the funicle with dark scaling, 2 to 6 with whitish scaling, the scales on 7 narrower than those on the other joints. *Prothorax* subcylindrical, the sides almost straight, the apex scarcely narrower than the base, the basal margin deeply bisinuate, the apical margin roundly prominent; when the scaling is intact the upper surface is closely covered with small punctures each containing a short scale-like seta, and there is a shallow transverse impression behind the middle. *Elytra* comparatively broad, with the shoulders rather prominent, the sides slightly sinuate behind the shoulders and rounded posteriorly, being broadest behind the middle, the apices broadly truncate, the longitudinal curvature very convex, the striæ deep and distinctly punctate, the intervals convex and closely set with short curved broad scale-like setæ, those on the pale area longer for the most part. *Legs* red-brown, with green and grey scaling.

Length, 5½–6½ mm.; breadth, 2⅝–3 mm.

ASSAM: Sylhet, Cachar. BURMA: Tharrawaddy, on teak seedlings (*E. P. Stebbing*).

Type in the British Museum.

In specimens which appear to be females of this species the rostral plate is rather narrower and its sides are distinctly sinuate and not strongly carinate.

Genus **MYLLOCERUS**.

Myllocerus, Schönherr, Disp. Meth. 1826, p. 178; Lacordaire, Gen. Col. vi, 1863, p. 213.

Macrocorynus, Schönherr, *l. c.* 1826, p. 179.—Type, *Curculio discoideus*, Oliv.

TYPE, *Curculio curvicornis*, F.

Head transverse, eyes variable in position and convexity. *Rostrum* stout, variable, the genæ dilated or not, the apical emargination varying from deep and triangular to shallow and rounded; the scrobes visible from above, very deep in front, but becoming rapidly shallow behind and vanishing before reaching the eye; the mandibles obtuse, pincer-like, not prominent and with a distinct scar; the mentum small and almost circular, but filling the buccal cavity, normally bearing only two setæ; the submentum without any peduncle. *Antennæ* inserted close to the apex of the rostrum; the scape elongate, curved and extending beyond the anterior margin of the prothorax; the funicle 7-jointed, the two basal joints longer than the others and either equal or not, the club variable. *Prothorax* variable in shape, either truncate or more or less deeply bisinuate at the base, the anterior margin without postocular lobes or vibrissæ and vertically or obliquely truncate at the sides, the gular margin truncate or very shallowly sinuate. *Scutellum* small. *Elytra* suboblong, much broader than the prothorax at the shoulders, which are distinct, with 10 punctate striæ, the sides generally subparallel from the shoulders to beyond the middle, the margins gently sinuate above the hind coxæ. *Sternum* with the front coxæ in the middle of the prosternum; the mesosternum with its epimeron much smaller than the episternum, yet separating it from the base of the elytra; the metasternum much longer than the median coxæ, the episternum broad and distinct throughout, the posterior coxæ not reaching the margin of the elytra. *Venter* with the intercoxal process ogival and narrower than the hind coxæ, segment 2 as long as or longer than 3+4 and separated from 1 by a curved incision which is shallower in the middle. *Legs* with the femora clavate and always with at least one tooth, sometimes with two, and the hind pair occasionally with three; the tibiæ simple, or occasionally sinuate at the base, the front pair sometimes bisinuate internally, the corbels of the hind pair open and terminal; the tarsi slender, joint 1 elongate, 3 broadly ovate, 4 rather short, the claws free.

Range. Africa, Eastern Europe, Central and Southern Asia, and Australia.

This large and somewhat heterogeneous genus will certainly require subdivision, but this cannot be accomplished satisfactorily without a thorough study of the many species described from other parts of the world, and this I have not yet been able to undertake. It seems probable that the number of setæ on the mentum will prove a valuable character. All the species that I have been able to re-examine recently have only two, except *M. fabricii*, Guér., *M. spectator*, sp. n., and *M. suavis*, Fst., which have four; and *M. tenuiclavis*, sp. n., which has eight or ten.

The following Indian species have been erroneously attributed to the genus *Myllocerus*:—

M. convexifrons, Fst., is a *Corigetus*.*
M. saturatevirens, Boh., is a *Corigetus*.
M. brevicollis, Boh., is a *Corigetus*.
M. multicostatus, Chev., is a *Corigetus*.
M. posticus, Walk., is an *Amblyrrhinus*.
M. retrahens, Walk., is an *Amblyrrhinus*.
M. acaciæ, Stebbing, is a *Platytrachelus*.
M. hirsutus, Desbr., is a *Cyphicerus*.
M. brachyderoides, Desbr., is a *Ptochus*.

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* The names *Corigetus*, Desbr., *Cyphicerus*, Schh., and *Platytrachelus*, Schh., are here used in the sense attributed to them by Faust, but it is doubtful whether after revision they will be retained for these particular species.

Key to the Species.

1 (14) Eyes entirely dorsal, so that the external margins of both are visible at the same time when viewed from above.

2 (13) Elytra with short, curved or recumbent, flattened or scale-like setæ, the apices jointly rounded.

3 (12) Base of prothorax strongly bisinuate and broader than the apex; elytra much broader at the shoulders than the base of prothorax.

4 (11) Anterior pairs of tibiæ not angulate internally.

5 (10) Prothorax strongly narrowed from base to apex, the sides straight.

6 (7) Forehead only slightly narrower than the space between the scrobes, and with a rounded central impression; femora with a small second tooth; legs and antennæ dark .. *viridanus*, F., p. 301.

7 (6) Forehead markedly narrower than the space between the scrobes, not impressed; femora with a single tooth.

8 (9) Elytra with longer raised curved setæ; eyes large and very flat; antennæ and legs blackish ...... *pætus*, sp. n., p. 303.

9 (8) Elytra with very short recumbent setæ; eyes moderately convex; antennæ and legs testaceous .... *evasus*, sp. n., p. 304.

10 (5) Prothorax subcylindrical, narrowed only in the anterior half; femora with a single tooth; antennæ flavescent .... *delicatulus*, Boh., p. 304.

11 (4) Anterior pairs of tibiæ distinctly angulate internally; forehead not or but little broader than the apex of the scape; sides of prothorax rounded; femora bidentate ...... *anamalainus*, sp. n., p. 305.

12 (3) Base of prothorax truncate and not wider than the apex; elytra exceptionally narrow at the shoulders .... *subglaber*, Fst., p. 305.

13 (2) Elytra with long erect hair-like setæ, the apices dehiscent; prothorax subcylindrical, the base subtruncate .... *suspiciens*, sp. n., p. 306.

14 (1) Eyes not entirely dorsal.

15 (74) Basal margin of prothorax truncate or subtruncate.

16 (45) Joint 1 of funicle evidently longer than 2.

17 (20) First joint of hind tarsi as long as the remaining three together.

18 (19) Elytra with short recumbent setæ.. *rusticus*, Fst., p. 306.

19 (18) Elytra with long erect setæ ...... *pilifer*, Fst., p. 307.

20 (17) First joint of hind tarsi shorter than the remaining three together.

21 (28) Apical margin of prothorax almost vertical at the sides; elytra with erect setæ.

22 (27) Rostrum longitudinally impressed between the antennæ.

23 (24) Funicle with joint 3 longer than 4; prothorax with confluent rugose punctation; elytra with uniform greyish scaling .... *kashmirensis*, sp. n., p. 308.

24 (23) Funicle with joint 3 not longer than 4; prothorax with large separated shallow punctures; elytra with metallic green scaling.

25 (26) Prothorax with a black central stripe, elytra with the suture black; legs piceous; setæ long, fine and black .... *nigrosuturalis*, sp. n., p. 308.

26 (25) Prothorax and elytra uniform green; legs flavous; setæ short, stout and flavescent .... *viridulus*, sp. n., p. 309.

27 (22) Rostrum not impressed between the antennæ, the epistome forming a flat bare plate in front of the antennæ .... *sericeus*, Fst., p. 309.

28 (21) Apical margin of prothorax very oblique at the sides.

29 (30) Eyes subdorsal, much depressed, the forehead scarcely broader than the eye; elytra brown, without erect setæ .... *planoculis*, sp. n., p. 309.

30 (29) Eyes lateral and convex, the forehead much broader than the eye.

31 (34) Setæ on elytra inconspicuous from the side, recumbent or subrecumbent.

32 (33) Elytra uniform pale green; prothorax as long as broad, its sides only slightly rounded .... *catechu*, Mshl., p. 310.

33 (32) Elytra brown, with transverse green bands; prothorax broader than long, its sides rather strongly rounded .... *pumilus*, sp. n., p. 311.

34 (31) Setæ on elytra conspicuous from the side, erect or suberect.

35 (36) Rostrum parallel-sided; elytra without green scaling .... *ignavus*, sp. n., p. 312.

36 (35) Rostrum narrowed from base to middle.

37 (40) Prothorax evidently broader than long, shorter than the head and rostrum together; scape very slender and rather abruptly clavate.

38 (39) Elytra green, the setæ short and suberect; rostrum gradually nar-

rowed from base to middle and slightly dilated at apex; scape more slender and strongly bent .. *setulifer*, Desbr., p. 312.
39 (38) Elytra brown, setæ much longer and more erect; rostrum strongly narrowed from base to middle and scarcely dilated at apex; scape less slender and less strongly bent. *consocius*, sp. n., p. 313.
40 (37) Prothorax not broader than long, about as long as the head and rostrum together.
41 (42) Scape very slender and rather abruptly clavate; elytra at shoulders twice as broad as greatest width of prothorax; prothorax green with three black stripes, elytra black with three transverse green patches .... *boviei*, sp. n., p. 313.
42 (41) Scape comparatively stout, gradually thickened; elytra at shoulders not twice as broad as prothorax.
43 (44) Prothorax green with three black stripes, elytra green variegated with black spots; dorsal outline of elytra convex, the setæ long, sparse and erect...................... *pretiosus*, Fst., p. 314.
44 (43) Upper surface of prothorax and elytra brown; dorsal outline of elytra almost flat from base to beyond middle, the setæ short, more numerous and curved...... *simplex*, Fst., p. 314.
45 (16) Joint 1 of funicle not longer than 2.
46 (55) Two basal joints of funicle equal.
47 (48) Prothorax and elytra entirely without scales, sparsely clothed with short hairs and long erect setæ; prothorax very strongly convex longitudinally, the basal one-fourth much depressed................ *desquamatus*, sp. n., p. 315.
48 (47) Prothorax and elytra clothed with scales; prothorax only slightly convex longitudinally.
49 (52) Width of forehead not greater than the length of the eye; rostrum almost as long as the basal width.
50 (51) Ground-colour testaceous or piceous brown; elytra with short curved suberect setæ; joint 1 of antennal club as long as broad .... *zeylanicus*, sp. n., p. 315.
51 (50) Ground-colour black; elytra with long erect curved setæ; joint 1 of club strongly transverse .... *hispidus*, sp. n., p. 316.
52 (49) Width of forehead evidently greater than the length of the eye.
53 (54) Rostrum about as long as broad, the apical emargination forming a right angle; front margin of

prothorax rounded dorsally; anterior pairs of tibiæ strongly angulate internally .... *angulatipes*, sp. n., p. 316.

54 (53) Rostrum much broader than long, the apical emargination forming an obtuse angle; front margin of prothorax truncate dorsally; anterior tibiæ not angulate .... *lineatocollis*, Boh., p. 317.

55 (46) Funicle with joint 2 longer than 1.

56 (73) Femora with only one tooth; anterior pairs of tibiæ not angulate internally.

57 (60) Prothorax with the front margin vertical at the sides and with two rounded impressions on the disk.

58 (59) Antennæ very thick, the terminal joints of the funicle transverse, the club not broader than the funicle........................ *discoideus*, Oliv., p. 318.

59 (58) Antennæ comparatively slender, the terminal joints of the funicle longer than broad, the club evidently broader than the funicle .. *postfasciatus*, sp. n., p. 319.

60 (57) Prothorax with the front margin oblique at the sides, not impressed on the disk.

61 (68) Elytra with long erect or suberect setæ.

62 (65) Scape testaceous, very slender and abruptly clavate; prothorax with three sharply defined dark stripes.

63 (64) Basal constriction of prothorax shallow, basal margin not narrower than the apical; funicle with joints 3 and 4 subequal........... *dorsatus*, F., p. 320.

64 (63) Basal constriction of prothorax much deeper than the anterior one, basal margin a little narrower than the apical; funicle with joint 3 longer than 4, the scape more slender and more abruptly clavate .... *tenuicornis*, Fst., p. 321.

65 (62) Scape black, less slender and gradually clavate; prothorax with two ill-defined darker stripes or none.

66 (67) Rostrum dilated at the apex, the scrobes continued deeply up to the eyes......................... *crinitus*, sp. n., p. 322.

67 (66) Rostrum not dilated at the apex, the scrobes shallow behind...... *pauper*, Fst., p. 322.

68 (61) Elytra with short erect or suberect setæ.

69 (70) Eyes prominent, the width of the head greater than that of the front margin of the prothorax .... *gracilis*, sp. n., p. 323.

70 (69) Eyes not projecting laterally beyond the front margin of the prothorax.

71 (72) Rostrum almost parallel-sided in the basal half; scape with stiff erect setæ; colouring uniform bright metallic green .... *smaragdinus*, sp. n., p. 323.

72 (71) Rostrum strongly narrowed from base to beyond middle; scape with very fine recumbent setæ; sides and under-parts green, upper surface with coppery scaling variegated with black.......... *conspersus*, sp. n., p. 321.

73 (56) Femora with two teeth; anterior tibiæ angulated internally...... *procerus*, Fst., p. 323.

74 (15) Basal margin of prothorax more or less distinctly bisinuate.

75 (132) Tooth of hind femora simple.

76 (83) Eyes almost flat.

77 (78) Prothorax narrower at base than at apex, the apical margin almost vertical laterally; elytra with greenish scaling and faint darker markings, and with rather long fine erect setæ .... *brachycollis*, Fst., p. 324.

78 (77) Prothorax not narrower at base than at apex, the apical margin oblique laterally.

79 (82) Rostrum with the carinæ only slightly elevated and parallel, the area between them scarcely broader than the lateral areas, as seen from above; prothorax and elytra not granulate.

80 (81) Prothorax transverse, with the sides simply rounded, the posterior angles not acute; colour grey, with indistinct brown markings .... *madurensis*, sp. n., p. 325.

81 (80) Prothorax bell-shaped, as long as broad, the sides rounded in front and constricted behind the middle, the posterior angles acute; colour uniform whitish green .... *minutus*, Fst., p. 325.

82 (79) Rostrum with the carinæ strongly elevated and slightly convergent in front, the space between them much broader than the lateral areas; prothorax and elytra granulate; prothorax black, with a pale lateral stripe and a pale median spot in front .... *luctuosus*, Desbr., p. 326.

83 (76) Eyes distinctly convex.

84 (93) First joint of funicle longer than second; apical emargination of rostrum comparatively shallow and obtuse.

85 (86) Club of the antennæ not broader than the funicle; tooth on the hind femora very large .... *tenuiclavis*, sp. n., p. 327.

86 (85) Club of antennæ evidently broader than the funicle; tooth on hind femora small.

87 (88) Prothorax with the sides straight or even sinuate, strongly narrowed from base to apex; rostrum with the scrobes not convergent, the median dorsal area bounded by prominent carinæ which are almost parallel...... *fabricii*, Guér., p. 328.

88 (87) Prothorax with the sides more or less rounded, broadest in front of the base; rostrum with the scrobes convergent, the median area widening behind, its bounding carinæ indistinct.

89 (90) Rostrum strongly dilated at apex; prothorax shallowly bisinuate at base, the disk evenly convex .... *lateralis*, Chev., p. 329.

90 (89) Rostrum only slightly dilated; prothorax deeply bisinuate at base, the disk broadly impressed on each side.

91 (92) Setæ on elytra conspicuous, broad, obliquely raised and curved.... *lætivirens*, sp. n., p. 330.

92 (91) Setæ inconspicuous, very short and recumbent .... *tusicollis*, sp. n., p. 330.

93 (84) First joint of funicle not longer than second.

94 (113) Second joint of funicle not longer than first.

95 (110) Base of prothorax not broader than the apex.

96 (107) Apical margin of prothorax oblique at the sides.

97 (102) Prothorax with a dorsal rounded fovea on each side behind the middle; base of rostrum almost as broad as the forehead.

98 (99) Prothorax flattened on the disk, which is bounded laterally by an obtuse costa; elytra usually green with four black stripes .. *impressicollis*, sp. n., [p. 331.

99 (98) Prothorax not flattened nor costate; elytra without black stripes.

100 (101) Elytra with very stout short erect bristles; setæ on scape recumbent; prothorax with a black central stripe .... *echinarius*, sp. n., p. 332.

101 (100) Elytra with much finer oblique setæ; setæ on scape erect; prothorax without a black stripe .. *manipurensis*, sp. n., [p. 333.

102 (97) Prothorax without dorsal foveæ.

103 (104) Eyes entirely lateral, so that the forehead is slightly broader

than the base of the rostrum; scrobes converging behind, the space between them half the width of the forehead .... *blandus*, Fst., p. 333.

104 (103) Eyes sublateral or subdorsal, the base of the rostrum evidently broader than the forehead; scrobes not converging behind, the forehead not or only a little broader than the space between them.

105 (106) Prothorax strongly constricted behind, the basal margin slightly narrower than the apical; forehead broader than the space between the scrobes .... *ineptus*, sp. n., p. 334.

106 (105) Prothorax very shallowly constricted behind, the basal margin not narrower than the apical; forehead not broader than the space between the scrobes .... *suavis*, Fst., p. 335.

107 (96) Apical margin of prothorax vertical at the sides.

108 (109) Eyes strongly convex; basal lobe of prothorax not emarginate; elytra with stria 6 passing the humeral angle and nearly reaching the base, the intervals with erect setæ .... *necopinus*, sp. n., p. 335.

109 (108) Eyes slightly convex; basal lobe of prothorax emarginate; elytra with stria 6 ceasing behind the humeral angle, the intervals with subrecumbent setæ ...... *sabulosus*, sp. n., p. 336.

110 (95) Base of prothorax broader than the apex.

111 (112) Body clothed with scales ...... *transmarinus*, Hbst., [p. 337.

112 (111) Body without scales, black, with fine recumbent pubescence and long erect setæ .... *pubescens*, Fst., p. 338.

113 (94) Second joint of funicle evidently longer than first.

114 (123) Prothorax narrower at apex than at base.

115 (120) Rostrum without any transverse carina near the apex of the median area.

116 (119) Basal sinuation of prothorax very shallow; elytra subtruncate or jointly sinuate at the base, with recumbent setæ.

117 (118) Rostrum broader than long; prothorax with the apical margin truncate dorsally, oblique at the sides; scutellum squamose; elytra grey, with dark brown discal spots .... *cardoni*, sp. n., p. 339.

118 (117) Rostrum as long as broad; prothorax with the apical margin sinuate in the middle, vertical laterally; scutellum bare; elytra uniform pale green...... *subglaucus*, sp. n., p. 339.

119 (116) Basal sinuation of prothorax deep; each elytron strongly rounded at the base and with short erect or suberect setæ.... *spectator*, sp. n., p. 340.

120 (115) Rostrum with a distinct transverse carina near the apex of the median area.

121 (122) Prothorax with the basal third much depressed below the level of the front margin, without any tubercle in the middle of the base; elytra with long erect setæ; legs without scaling .... *lefroyi*, sp. n., p. 340.

122 (121) Prothorax with the dorsal outline flat and with an elongate tubercle in the middle of the base (rudimentary in ♂); elytra with very short recumbent setæ; legs clothed with scales ...... *nodicollis*, sp. n., p. 341.

123 (114) Prothorax not narrower at apex than at base.

124 (125) Eye as broad as the forehead; apical emargination of rostrum shallow and forming a broad obtuse angle; elytra with rather long erect setæ .... *severini*, sp. n., p. 342.

125 (124) Forehead twice, or nearly twice, as broad as the eye; apical emargination of rostrum deep and acute; elytra with very short recumbent setæ.

126 (127) Funicle very slender, its length (including club) greater than that of rostrum, head and prothorax together; apical margin of prothorax very oblique at the sides; tibiæ not sinuate internally at base...................... *impallescens*, sp. n., p. 342.

127 (126) Funicle moderately stout, not longer than rostrum, head and prothorax; apical margin of prothorax vertical or very slightly oblique at the sides; tibiæ sinuate internally at base.

128 (129) Rostrum as long as broad; prothorax about as long as broad and not transversely impressed near base; elytra obliquely truncate at apex .... *improvidus*, sp. n., p. 343.

129 (128) Rostrum broader than long; prothorax much broader than long and transversely impressed near the base; elytra rounded at apex.

130 (131) Rostrum longer than head, the dorso-lateral carinæ distinct to base; basal constriction of prothorax only slightly deeper than the apical one .... *curvicornis*, F., p. 343.

131 (130) Rostrum not longer than head, the dorso-lateral carinæ disappearing before the base; basal constriction of prothorax much deeper than the apical .. *roscidus*, sp. n., p. 344.

132 (75) Tooth of hind femora bi- or tridentate.

133 (136) Tooth of hind femora bidentate.

134 (135) Forehead a little broader than the eye; elytra without metallic green spots.................. *subfasciatus*, Guér., p. 345.

135 (134) Forehead not broader than the eye; elytra with pale metallic green spots.................. *andrewesi*, sp. n., p. 346.

136 (133) Tooth of hind femora tridentate.

137 (140) Two basal joints of funicle subequal; space between the eyes much greater than the long axis of the eye.

138 (139) Rostrum very slightly narrowed from base to apex; elytra with narrow, finely punctate striæ, the setæ minute and discernible with difficulty .... *dentifer*, F., p. 347.

139 (138) Rostrum a little broader at the apex; elytra with broad, coarsely punctate striæ, the setæ comparatively long, recumbent and easily discernible .... *discolor*, Boh., p. 348.

140 (137) Joint 2 of funicle markedly longer than 1.

141 (142) Space between the eyes not greater than that between the scrobes; humeral angles of elytra slightly projecting laterally; elytra white with large dark blotches .... *undatus*, sp. n., p. 350.

142 (141) Space between the eyes evidently greater than that between the scrobes; humeral angles not projecting laterally; colour very variable .... 11-*pustulatus*, Fst., p. 350.

261. Myllocerus viridanus, *F.*

Curculio viridanus, Fabricius,* Syst. Ent. 1775, p. 155.
Myllocerus viridanus, Boheman, Schönh. Gen. Curc. ii, 1834, p. 427; Stebbing, Indian Forest Insects, 1914, p. 398.
Myllocerus angustifrons, Faust,* Deut. Ent. Zeit. 1897, p. 356.

Black, with dense uniform light green scaling, varying to pale greenish white; in the latter case the insects sometimes exhibit a

chalky-white efflorescence, the head being usually tinged with yellow and with metallic green scales at the apex of the rostrum.

Head narrowed from back to front, the sides straight, the eyes dorsal (so that the external margins of both can be seen plainly from above at the same time) and converging slightly in front, the forehead with a rounded impression and about as broad as the width of the eye. *Rostrum* evidently longer than the head, not or but slightly broader than long, narrowed from base to apex, the sides straight; the scrobes entirely dorsal, the space between them a little broader than the forehead; the median area parallel-sided for the most part, but somewhat narrowed at the base, shallowly impressed and with a central carina which is more or less obscured by scaling behind; from the lower anterior corner of the eye runs a low rounded longitudinal ridge, which curves inwards indistinctly about the middle; mandibles red-brown, with the cutting edges broadly black. *Antennæ* black or piceous, the two basal joints of the funicle elongate and subequal, joint 3 a little longer than 4, and 4 than 5. *Prothorax* subconical, broadest at the base and strongly narrowed to the apex, the sides straight, the basal margin very deeply bisinuate, the upper surface set with deep separated punctures which are concealed by the scaling. *Elytra* almost parallel-sided from the shoulders to beyond the middle in the ♂, dilated behind the middle and with the shoulders laterally prominent in the ♀; the striæ (when covered with scaling) very narrow and with fine longitudinal punctures, the intervals plane, the setæ very short and subrecumbent. *Legs* black, with green scaling; all the femora bidentate, the outer tooth always small, but sometimes reduced to a mere trace.

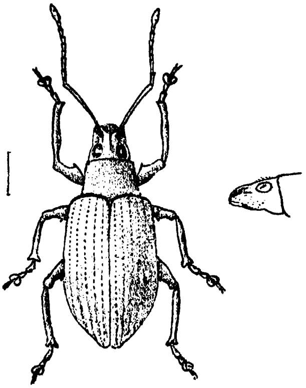

Fig. 93.—*Myllocerus viridanus*, F.

Length, $3\frac{1}{4}$–$4\frac{1}{2}$ mm.; breadth, $1\frac{1}{2}$–$2\frac{1}{4}$ mm.

Madras: on teak, Coimbatore (*E. P. Stebbing*); on groundnuts, Trichinopoli and Chepauk (Pusa Coll.); on plumbago, Bangalore (*C. D. Gregson*); on Hibiscus, Shoranur, Malabar (Pusa Coll.); on jute, Kumbakonani (Pusa Coll.); Trivandrum (*Annandale*); Tanjore (*G. R. Dutt*); Manaparai (Pusa Coll.); Trichar, 300 ft., Parambikulam, 1700–3200 ft., and Chalakudi Ernakulam, Cochin State (*F. H. Gravely*—Ind. Mus.); Pondicherry, Genji and Mahe (*Maindron*); Madura (*C. Somers-Smith, R. Barton Wright*); Bellary (*de Morgan*); S. Mysore (*H. L. Andrewes*); Droog, Kallar, Bhavani Valley and Ouchterlony Valley, 1000–6000 ft., Nilgiri Hills (*Andrewes*); Anamalai Hills, 3500–4000 ft. (*Andrewes*). CEYLON: Colombo, Galle, Balangoda and Dikoya (*G. Lewis*); Kandy (*G. E. Bryant*); Negombo (*Dr. W. Horn*).

Type in the Copenhagen University Museum; type of *M. angustifrons* in the Dresden Museum.

Faust misidentified *M. delicatulus*, Boh., as being the *Curculio viridanus* of Fabricius, and consequently redescribed the latter species under the name of *M. angustifrons*.

When I examined the type of *M. fringilla*, Fst. (from Malacca) some years ago, I formed the opinion that it was probably a synonym of *M. viridanus*; but I cannot now state this with certainty. Dr. Heller has referred to *M. fringilla* various specimens taken by Dr. Walther Horn in Ceylon which I have not seen (Deut. Ent. Zeit. 1901, p. 338). Faust states that *M. viridanus* (*angustifrons*) has only one femoral tooth, whereas *M. fringilla* has two, the rostrum also being longer and the elytra being produced downwards at the apex. He was certainly mistaken as to the femoral teeth in *M. viridanus*, and the other distinctions given are of dubious value.

262. **Myllocerus pætus**, sp. nov.

Black or piceous, with close uniform pale green scaling above and below, sometimes varying to grey on the disk of the elytra.

Structurally this species is closely allied to *M. viridanus*, from which it differs in the following characters:—

Head with the eyes distinctly larger and much flatter, the forehead not impressed, much narrower, being (at its narrowest) only about half the width of the eye. *Rostrum* only slightly longer than the head and evidently broader than long, the space between the scrobes proportionately broader than the forehead, the costa running from the outer corner of the eye continuous with the lower margin of the scrobe. *Prothorax* distinctly more convex on the disk and with the punctures more distant. *Elytra* with the shoulders more obliquely rounded, and not projecting at all in the ♀, the scales less closely set and the setæ longer and more elevated. *Legs* without a trace of a second tooth on the femora.

Length, 3½–4½ mm.; breadth, 1½–2¼ mm.

MADRAS: Teppukadu, 2500 ft., Nilgiri Hills (*H. L. Andrewes*). CENTRAL PROVINCES: Nagpur (*E. d'Abreu*).

Type in the British Museum.

263. **Myllocerus evasus**, sp. nov.

Another very close ally of *M. viridanus*, which it resembles in its general form, pale green scaling, and short recumbent setæ. The distinctions are as follows:—

Head with the eyes more nearly circular and rather more convex, the forehead without any impression and much narrower than either the eye or the space between the scrobes. *Rostrum* with the central area evidently narrowing from apex to base, the raised edges of the apical emargination forming a much wider angle, and the costa in front of the eye evanescent. *Antennæ* testaceous brown. *Elytra* with the shoulders not projecting laterally in the ♀. *Legs* testaceous, the femora without any trace of a second tooth.

Length, 3½–4 mm.; breadth, 1½–2 mm.

MADRAS: Palur, South Arcot, on ground-nut; Nellikuppam, S. Arcot, on indigo (Pusa Coll.).

Type in the British Museum.

264. **Myllocerus delicatulus**, *Boh.*

Myllocerus delicatulus, Boheman,* Schönh. Gen. Curc. vii, pt. 1, 1843, p. 6.

Phyllobius mimicus, Walker,* Ann. Mag. Nat. Hist. (3) iii, p. 263 (1859).

Myllocerus viridanus, Faust * (*nec* Fabr.), Deut. Ent. Zeit. 1897, p. 357, note 1.

Colour piceous, with uniform light yellowish-green scaling.

Head subconical, with the eyes as in *M. viridanus*, F., but further apart, the space between them almost as broad as the eye, the forehead not impressed. *Rostrum* and *antennæ* as in *viridanus*, but the latter flavescent. *Prothorax* transverse, subcylindrical or with the sides parallel at the base and slightly narrowed in the apical half, the basal sinuation shallower. *Elytra* with the bases less strongly rounded, the punctation of the striæ scarcely perceptible through the scaling. *Legs* flavescent, the femora with a single small tooth.

The remaining characters as in *M. viridanus*.

Length, 2½–3½ mm.; breadth, 1¼–1¾ mm.

CEYLON: Negombo, Anuradhapura (*Dr. Horn*). MADRAS: Pondicherry (*Perrotet*); Genji (*Maindron*); Madura (*C. Somers Smith*); Kallar, 1000 ft., and Bhavani Valley, 2000 ft., Nilgiris (*H. L. Andrewes*); Anamalais, 3500–4000 ft. (*H. L. Andrewes*); Chalakudi, Cochin State (*F. H. Gravely*—Ind. Mus.).

Type in the Stockholm Museum.

The examples from the Nilgiris differ from the typical form, from the Coromandel Coast, in having the antennæ more slender, and the two basal joints of the funicle rather longer, the second being a trifle longer than the first. On the other hand, the Anamalai specimens have the antennæ and legs rather stouter than in the type; the scaling is rather more metallic and the head and legs have a coppery tint.

265. **Myllocerus anamalainus**, sp. nov.

Colour black or piceous, with uniform pale green scaling.

Allied to *M. viridanus*, F., but with the following distinctions:—

Head with the forehead rather more deeply impressed, not or very little broader than the apex of the scape, and evidently narrower than the space between the scrobes. *Antennæ* stouter, joint 2 of the funicle very slightly longer than 1. *Prothorax* with the sides rounded, broadest rather behind the middle, the basal sinuations shallower, the punctation (when the scaling is removed) much coarser and confluent. *Elytra* much more elongate, the shoulders less sloping and roundly rectangular. *Legs* with an internal angular prominence near the middle of the four anterior tibiæ; all the femora bidentate.

Length, 4¼–6 mm.; breadth, 1¾–2½ mm.

MADRAS: Anamalai Hills, 3500–4000 ft. (*H. L. Andrewes*).

Type in the British Museum.

266. **Myllocerus subglaber**, *Fst.*

Myllocerus subglaber, Faust,* Deut. Ent. Zeit. 1897, p. 369.

Colour black, with a few sparse whitish scales (specimens probably abraded).

Head subconical, the eyes dorsal, the forehead a little narrower than the width of the eye and about as broad as the space between the scrobes, with a shallow central stria. *Rostrum* longer than the head, a little broader than long, slightly narrowed from the base to the middle, the apex scarcely dilated, the apical emargination comparatively shallow and rounded, longitudinally impressed and narrowly tricarinate above, the central dorsal area rather narrower than the lateral ones. *Antennæ* chestnut-brown, rather thick; the funicle with the two basal joints subequal, 3 a little longer than 4. *Prothorax* broader than long, the sides rather strongly rounded, broadest at the middle, the base and apex of equal width, the basal margin truncate, the dorsal anterior margin produced and distinctly sinuate in the middle, the upper surface closely and coarsely punctate throughout. *Elytra* subelliptical, the shoulders only slightly broader than the greatest width of the prothorax, the base subtruncate, the apices jointly rounded, the striæ closely and distinctly punctate, the intervals without perceptible setæ. *Legs* black or piceous, the femora with a single small tooth.

Length, 3¼–3½ mm.; breadth, 1⅜–1½ mm.

MADRAS: Madura (*C. Somers Smith*). BURMA: Taung-ngu (*G. Q. Corbett*).

Type in the Dresden Museum.

The narrow shoulders and subelliptical elytra give the species a very distinctive facies.

267. **Myllocerus suspiciens**, sp. nov.

Colour black, sparsely clothed with pale green scales (perhaps denuded) which are small, circular and convex.

Head with the eyes entirely dorsal, subcircular, the forehead much narrower than the eye and also narrower than the space between the scrobes, with a deep central fovea. *Rostrum* about as long as the head and almost as long as broad, gradually narrowed from base to apex, the sides almost straight, the apical emargination deep and angulated, the scrobes entirely dorsal; the central dorsal area about as wide as the lateral areas, the carinæ bounding it distinct and converging only near the base, with a fine central carina. *Antennæ* black or piceous, the scape only slightly curved, rugosely punctate and with recumbent pale setæ; the funicle with joint 2 slightly longer than 1, joints 3 and 4 subequal. *Prothorax* subcylindrical, a little broader than long, the sides scarcely rounded, the base subtruncate and only slightly broader than the apex, of which the dorsal margin is rounded; the upper surface coarsely and closely punctate. *Elytra* jointly subtruncate at the base, the shoulders moderately prominent, the sides parallel to beyond the middle (? ♀), the rather broad striæ with large shallow punctures, the intervals slightly convex, each with a row of rather long erect yellowish setæ. *Legs* with green scaling and recumbent white setæ, the tibiæ not angulate internally, the femora with a single tooth.

Length, 4 mm.; breadth, 1½ mm.

SOUTH INDIA.

Type in the British Museum.

268. **Myllocerus rusticus**, *Fst.*

Myllocerus rusticus, Faust,* Deut. Ent. Zeit. 1897, p. 368.

Colour black or piceous, with thin greyish scaling.

Head very finely striolate, the eyes lateral, the forehead much broader than the space between the scrobes. *Rostrum* as long as broad, about as long as the head, rather strongly dilated at the apex, the apical emargination not very deep and forming an acute angle, with a longitudinal impression above and a narrow carina on each side of it. *Antennæ* piceous, very long and rather slender; the funicle with joint 1 much longer than 2, 3 evidently longer than 4, 4 to 7 subequal. *Prothorax* much broader than long, the sides strongly rounded in the ♂, less so in the ♀, broadest at the middle, truncate at the base, the apex vertically truncate at the sides and scarcely narrower than the base; the upper surface with finely rugose punctation. *Elytra* subtruncate at the base, narrowly elongate and parallel-sided in the ♂, broader and somewhat dilated posteriorly in the ♀, deeply punctato-striate, the intervals convex, not broader than the striæ in the ♂, broader in the ♀, the setæ very short and subdepressed. *Legs* black, the femora with one small tooth, the tarsi elongate, the first joint as long as the remaining three.

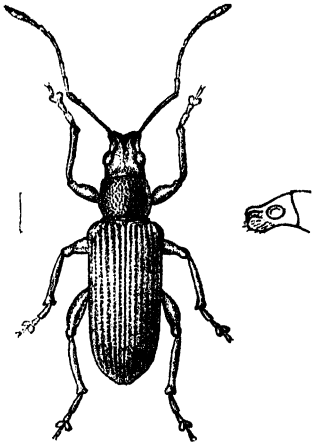

Fig. 94.—*Myllocerus rusticus*, Fst.

Length, ♂ 3½–4¼, ♀ 4¾ mm.; breadth, ♂ 1¼–1½, ♀ 2⅛ mm.

PUNJAB: Chamba (*C. Somers Smith*). KASHMIR (*T. R. D. Bell*).

Type in the Dresden Museum.

269. **Myllocerus pilifer**, *Fst.*

Myllocerus pilifer, Faust,* Deut. Ent. Zeit. 1897, p. 367.

Colour black, with uniform pale grey scaling.

Very closely allied to *M. rusticus*, Fst., but distinguished by the following characters:—

Rostrum scarcely dilated at the apex. *Prothorax* less transverse, the sides slightly rounded in the ♂, more strongly so in the ♀, the apical margin rather obliquely truncate at the sides, the upper surface with short suberect setæ directed forwards. *Elytra* parallel-sided in the ♀ also, the apical declivity almost perpendicular in both sexes, instead of sloping, the intervals with dense long erect setæ. *Legs* with the femoral tooth larger.

Length, ♂ 4¾, ♀ 5½ mm.; breadth, ♂ 1¾, ♀ 1⅛ mm.

PUNJAB: Chamba (*C. Somers Smith*).

Type in the Dresden Museum.

270. **Myllocerus kashmirensis**, sp. nov.

Black, with uniform yellowish-grey scaling.

Head striolate, the eyes widely separated, the forehead much broader than the space between the scrobes. *Rostrum* about as long as the head, the sides slightly narrowed from the base to the middle, scarcely dilated at the apex, the apical emargination shallow and forming an obtuse angle, longitudinally impressed above, with a faint central carina, the lateral carinæ indistinct. *Antennæ* piceous, elongate; the funicle with joint 1 longer than 2, and 3 longer than 4. *Prothorax* transverse, the sides moderately rounded, broadest at the middle, the basal margin truncate, not broader than the apex, which is almost vertically truncate at the sides; the upper surface with close confluent punctation and short erect setæ. *Elytra* truncate at the base, the shoulders roundly rectangular, the sides parallel in the ♂, slightly ampliated behind the middle in the ♀, the striæ rather deep and finely punctate, the setæ long, fine and erect. *Legs* black, the femora with a small tooth.

Length, 2½–3¼ mm.; breadth, 1–1½ mm.

KASHMIR (*T. R. D. Bell*). PUNJAB: Jhilam (*T. R. D. Bell*).

Type in the British Museum.

271. **Myllocerus nigrosuturalis**, sp. nov.

Colour black, with metallic green scaling; the prothorax with a broad black central stripe, more or less dilated in the middle; the elytra with the suture black from the base to the middle of the declivity, and the intervals 3 and 4 usually more or less denuded of green scales.

Head slightly convex, the eyes lateral and large, almost as wide as the forehead, the latter broader than the space between the scrobes and with a short central stria. *Rostrum* rather shorter than the head, evidently dilated at the apex, the apical emargination very small and rounded behind; this emargination seems to be deeper than it really is owing to the fact that the broad and deep dorsal furrow is continued right up to the apex, being bounded on each side by a narrow carina, but without any central one. *Antennæ* piceous, long and slender; the funicle with joint 1 longer than 2, the remainder subequal. *Prothorax* rather broader than long, the sides rounded, broadest about the middle, the basal margin truncate and not broader than the apex; the upper surface with coarse punctation more or less concealed by the scaling and with short erect black setæ. *Elytra* elongate, subtruncate at the base, the shoulders roundly rectangular, the apices jointly rounded, finely punctato-striate and set with long erect black setæ. *Legs* piceous, the femora with green scaling and each with a small tooth.

Length, 2⅛–3½ mm.; breadth, ⅞–1½ mm.

BURMA: Ruby Mines (*Doherty*).

Type in the British Museum.

272. **Myllocerus viridulus**, sp. nov.

Colour black, with uniform metallic green scaling.

Head without stria or carina, the eyes widely separated, the forehead much broader than the space between the scrobes. *Rostrum* a little shorter than the head, its sides subparallel, the apical emargination very shallow, the upper surface longitudinally impressed but without distinct carinæ. *Antennæ* piceous, the scape with erect setæ; the funicle with joint 1 longer than 2, 3 and 4 equal. *Prothorax* transverse, its sides very slightly rounded, broadest at the middle, truncate at the base, the apex of equal width and vertically truncate at the sides; the upper surface with large shallow punctures (concealed by the scaling) and a shallow transverse impression near the apex. *Elytra* subtruncate at the base, the shoulders roundly rectangular, the striæ deep and with shallow punctures, the intervals with short stiff erect yellowish setæ. *Legs* flavous, the femora with a small tooth.

Length, 2¼ mm.; breadth, 1 mm.

ASSAM: Manipur (*Doherty*).

Type in the British Museum.

273. **Myllocerus sericeus**, *Fst.*

Myllocerus sericeus, Faust,* Deut. Ent. Zeit. 1897, p. 362.

Colour piceous black, with uniform pale green scaling.

Head with the eyes lateral, the forehead twice as broad as the space between the scrobes, without any central stria or carina. *Rostrum* rather longer than the head, shorter than its width at the base, the sides strongly narrowed from the base to the apex, the apical emargination extremely small and shallow; the epistome truncate behind and forming a quite plane bare plate in front of the antennæ, between which there is no longitudinal impression; the upper surface with a small shallow impression and without carinæ. *Antennæ* flavescent and rather stout, the scape strongly curved and with suberect setæ, the funicle with joint 1 longer than 2, 3 and 4 equal. *Prothorax* transverse, the sides slightly rounded, broadest at the middle, the apical margin almost vertically truncate at the sides and not narrower than the base, which is subtruncate; the upper surface with confluent shallow punctation and short erect setæ. *Elytra* subtruncate at the base, the shoulders roundly rectangular, the sides subparallel, the striæ finely punctate, the intervals with short suberect pale setæ. *Legs* flavous, the femora with a small tooth.

Length, 3½–4½ mm.; breadth, 1½–2 mm.

PUNJAB: Dalhousie and Chamba (*C. Somers Smith*).

Type in the Dresden Museum.

274. **Myllocerus planoculis**, sp. nov.

Colour black, with uniform brown scaling above, the sides of the prothorax and the whole lower surface greyish.

Head striolate, the eyes subdorsal and flattened, the forehead broader than the space between the scrobes, but scarcely broader than the width of the eye. *Rostrum* about as long as the head, the sides almost straight and slightly narrowed from the base to the apex, the apical emargination very shallow, the base of the epistome being obtusely angulate; the upper surface with a longitudinal impression carinate at its edges and with a fine central carina. *Antennæ* dark ferruginous, the funicle with joint 1 longer than 2, and 3 a little longer than 4. *Prothorax* a little broader than long, the sides slightly rounded, broadest at the middle, the base truncate, the apex rather narrower and obliquely truncate; the upper surface with close confluent punctation partly visible through the scaling. *Elytra* a little widened behind the middle, the longitudinal curvature flat, the shoulders roundly rectangular, the striæ narrow and distinctly punctate, the intervals without appreciable setæ. *Legs* dark ferruginous, the femora with a small sharp tooth.

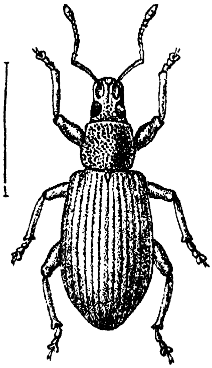

Fig. 95.—*Myllocerus planoculis*, Mshl.

Length, $3\frac{1}{8}$ mm.; breadth, $1\frac{1}{2}$ mm.

MADRAS: Nilgiri Hills (*H. L. Andrewes*).

Type in the British Museum.

275. Myllocerus catechu, *Mshl.*

Myllocerus catechu, Marshall, Ann. Mag. Nat. Hist. (8) xii, 1913, p. 185; Stebbing, Indian Forest Insects, 1914, p. 403.

Colour black, with uniform pale metallic green scaling, the prothorax with a lateral fuscous stripe on each side.

Head almost plane, the eyes lateral and rather prominent, the forehead much broader than the space between the scrobes. *Rostrum* a little longer than the head, shorter than its width at the base, the sides narrowed from the base to beyond the middle and dilated at the apex, the apical emargination comparatively shallow and forming a right angle, shallowly impressed above and with a fine central stria which ascends the forehead, the lateral carinæ obsolete. *Antennæ* ferruginous, the funicle with joint 1 evidently longer and thicker than 2, the remaining joints subequal. *Prothorax* about as broad as long, the sides slightly rounded, broadest at the middle, very shallowly constricted and transversely impressed near the apex, the basal margin subtruncate and not broader than the apex, the sculpturing entirely concealed by the scaling. *Elytra* shallowly emarginate at the base, about twice as broad as the prothorax at the shoulders, the sides parallel, distinctly punctato-striate, the intervals slightly convex, the setæ very minute and depressed, only visible under a high magnification. *Legs* flavescent, the femora with green scaling and each with a minute tooth.

Length, $2\frac{1}{8}$–$2\frac{1}{2}$ mm.; breadth, $\frac{7}{8}$–1 mm.

BOMBAY: Poona.

Type in the British Museum.

Recorded by Mr. E. P. Stebbing as feeding upon the leaves of *Acacia catechu.*

276. **Myllocerus pumilus**, sp. nov.

Colour black, with brown scaling and green markings; the head green, the prothorax with a broad green lateral stripe, the elytra with four transverse green bands extending from stria 1 to the margin and dilated externally so as almost to touch one another, these bands sometimes very much reduced.

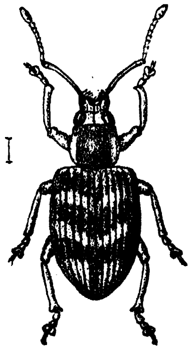

Fig. 96.—*Myllocerus pumilus*; Mshl.

Head with the eyes lateral and rather prominent, the forehead broader than the space between the scrobes. *Rostrum* about as long as the head, somewhat dilated towards the apex, the apical emargination rather shallow and rounded; the upper surface scarcely impressed and with a faint central carina, the lateral carinæ obsolete or indefinite. *Antennæ* piceous, the funicle with joint 1 a little longer and thicker than 2, the remainder subequal. *Prothorax* slightly broader than long, the sides rounded, broadest at the middle, very shallowly constricted and transversely impressed near the base and apex, the basal margin subtruncate, not broader than the apex. *Elytra* subtruncate at the base, the shoulders rectangular, the apices jointly rounded, the striæ deep and finely punctate, the intervals with short subdepressed setæ. *Legs* ferruginous, the femora with a fine tooth.

Length, 2⅛ mm.; breadth, ⅞ mm.

ASSAM: Naga Hills (*Doherty*).

Type in the British Museum.

277. **Myllocerus ignavus**, sp. nov.

Colour black, with brown scaling, more or less interspersed with grey scales.

Head very finely striolate, the eyes lateral, the forehead broader than the space between the scrobes. *Rostrum* about as long as the head, parallel-sided, the apical emargination shallow and obtusely angulate, shallowly impressed above and with a very fine central carina. *Antennæ* dark ferruginous, the funicle with joint 1 a little longer than 2, and 3 slightly longer than 4. *Prothorax* a little broader than long, the sides slightly rounded, broadest at the middle, faintly constricted before and behind the middle, the base truncate, not broader than the apex, the apical margin oblique at the sides. *Elytra* comparatively broad and longitudinally convex, the shoulders roundly rectangular, the striæ rather deep and shallowly punctate, the intervals with short erect dark setæ. *Legs* dark ferruginous, the femora with a small tooth.

Length, 2¼–3 mm.; breadth, 1–1¼ mm.

MADRAS: Nilgiri Hills (*H. L. Andrewes*—type); Anamalai Hills, 3500–4000 ft. (*H. L. Andrewes*).

Type in the British Museum.

278. **Myllocerus setulifer**, *Desbr.*

Myllocerus setulifer, Desbrochers des Loges,* Ind. Mus. Notes, iv, 1899, p. 111.

Colour black, with uniform metallic yellowish-green scaling.

Head with the eyes lateral, the forehead broader than the space between the scrobes. *Rostrum* rather shorter than the head, the sides narrowed from the base to the middle and slightly dilated at the apex, the apical emargination very shallow, the base of the epistome broadly rounded; the upper surface scarcely impressed, with a short central stria and without carinæ; the scrobe scarcely continued behind the insertion of the antennæ. *Antennæ* flavous, the scape very slender and rather abruptly clavate, the funicle with joint 1 longer than 2, 3 and 4 equal. *Prothorax* much broader than long, the sides slightly rounded, broadest at the middle, shallowly constricted near the base and apex, the basal margin truncate, not broader than the apex, the apical margin oblique at the sides; the upper surface with close confluent punctation hidden by the scaling, *Elytra* subtruncate at the base, the shoulders roundly rectangular, finely punctato-striate, the intervals with short suberect black setæ. *Legs* flavous, the femora with green scaling and with a minute tooth.

Length, 2¾–3 mm.; breadth, 1¼–1⅜ mm.

UNITED PROVINCES: Dehra Dun.

Type in the Indian Museum.

279. **Myllocerus consocius**, sp. nov.

Colour black, with uniform brown scaling.

Very closely allied to *M. setulifer*, Desbr., and differing only as follows:—

The head much broader; the rostrum much more strongly narrowed from the base to beyond the middle, the apex scarcely dilated, the scrobes evidently continued behind the antennæ; the scape thicker and less sharply bent; the whole upper surface with much longer, more erect and stiff setæ.

Length, 3¼–4 mm.; breadth, 1½–1⅝ mm.

MADRAS: Nilgiri Hills (*Sir G. Hampson & H. L. Andrewes*).

Type in the British Museum.

280. **Myllocerus boviei**, sp. nov.

Colour black, with markings of metallic green scaling; the head green, with a quadrate black patch on the vertex; the prothorax with three black stripes, the centre one being broader than the others; the elytra with a transverse basal green patch extending from the first stria to the shoulder; another about the middle, from stria 1 to the margin, but very variable on the disk, its posterior edge almost transverse, but the anterior one sloping forwards to beneath the shoulder; a third green patch behind the middle, from stria 3 to the margin, its anterior edge sloping forwards, the posterior concave and extending along the margin to the apex, then ascending the declivity for a short distance along the suture and the first interval.

The structural characters agree with those of *M. setulifer*, Desbr., except that the prothorax is not broader than long, the elytra are decidedly broader in proportion to their length and their dorsal curvature is much more convex. The legs and antennæ are also flavous.

Length, 2–3 mm.; breadth, 1–1½ mm.

BENGAL: Chota Nagpur (*Cardon*—type); Paresnath, 4000–4400 ft. (*J. T. Jenkins*—Ind. Mus.).

Type in the British Museum.

281. **Myllocerus pretiosus**, *Fst.*

Myllocerus pretiosus, Faust,* Deut. Ent. Zeit. 1897, p. 363.

Colour black, with metallic green scaling, the head with a large black patch on the vertex; the prothorax with three black stripes, the centre one twice as broad as the lateral ones; the elytra with the suture entirely black and the intervals 2 to 5 variegated with black spots.

Head with the eyes lateral, the forehead broader than the space between the scrobes. *Rostrum* rather longer than the head, a little shorter than its own width at the base, the sides strongly narrowed from the base to the middle and dilated again at the apex, the apical emargination rather shallow, the base of the epistome forming a right angle; the upper surface scarcely impressed, with a faint central stria and without carinæ. *Antennæ* ferruginous, moderately stout, the funicle with joint 1 longer than 2, and 3 longer than 4. *Prothorax* as long as, or slightly longer than broad, the sides slightly rounded, broadest at the middle, shallowly constricted near the base and the apex, the basal margin truncate, not broader than the apex, the apical margin oblique at the sides; the upper surface with the coarse punctation partly hidden by the scaling. *Elytra* subtruncate at the base, the shoulders roundly rectangular, the sides subparallel, the striæ narrow and finely punctate, the intervals with sparse erect setæ. *Legs* piceous to flavous, the femora with green scaling and with a single sharp tooth.

Length, 3¼–3½ mm.; breadth, 1½–2 mm.

BOMBAY: Belgaum (*H. E. Andrewes*); Khanapur and Bidi, Belgaum (*H. V. Kemball*); N. Kanara (*Bell*). MADRAS: Mahé (*Maindron*); on egg-plant, Shoranur, Malabar (Pusa Coll.).

Type in the Dresden Museum.

This species superficially resembles *M. dorsatus*, F.

282. **Myllocerus simplex**, *Fst.*

Myllocerus simplex, Faust,* Deut. Ent. Zeit. 1897, p. 364.

Colour black, with brown scaling above, the sides and underparts greyish or pale greenish.

Closely allied in structure to the very differently coloured *M. pretiosus*, Fst., but much smaller and rather more elongate; the rostrum is not longer than the head; the third joint of the funicle is not longer than the fourth; the posterior constriction of the prothorax is more marked than the anterior one; the setæ on the elytra are much shorter, more dense and more depressed.

Length, 2⅛ mm.; breadth, ¾ mm.

BOMBAY: Belgaum (*H. E. Andrewes*). MADRAS: Thanelanka, Godavari dist., on red gram.

Type in the Dresden Museum.

283. **Myllocerus desquamatus**, sp. nov.

Colour shining piceous black, the apex of the rostrum, the sutural and lateral margins of the elytra, the under-parts of the prothorax, and the legs paler, the antennæ testaceous; entirely without scaling, except for a few feathery scales on the coxæ, the mesosternum, and the side-pieces of the metasternum.

Head very finely aciculate, with a few scattered punctures, the forehead much broader than the interscrobal area and with an elongate central fovea, the eyes moderately convex. *Rostrum* a little longer than the head, distinctly narrowed from the base to beyond the middle, then strongly dilated, the apical emargination shallow and forming a wide obtuse angle; the upper surface almost plane, finely aciculate, with a slight central carina, the lateral carinæ rather indefinite, the scrobes somewhat convergent. *Antennæ* elongate, the scape rather slender and abruptly clavate, with sparse erect setæ; the funicle with joints 1 and 2 equal, 3 not longer than 4, and the last three joints about as long as broad. *Prothorax* as long as broad, the sides roundly dilated in the middle only, the basal margin somewhat rounded and equal in width to the apical, which is slightly oblique at the sides; the upper surface very strongly convex, longitudinally as well as transversely, the basal one-fourth being depressed much below the level of the disk, which is shiny and bears a few large scattered punctures, the basal area being finely aciculate and dull. *Elytra* jointly subtruncate at the base, dilated behind the middle (♀), the shoulders prominent and subrectangular, the striæ with shallow punctures; the intervals rather convex, shiny and impunctate, sparsely clothed with short fine recumbent hairs and with very long pale erect setæ. *Legs* shiny, impunctate and with sparse pale setæ, the femora rather more abruptly clavate than usual and all with a single small tooth, the tibiæ simple internally.

Length, 4 mm.; breadth, 1¾ mm.

BOMBAY: Bandra (*N. B. Kinnear*).

Type ♀ in the British Museum.

Superficially this very distinct insect resembles *M. pubescens*, Fst., which is the only other Indian species of the genus that is devoid of scaling; but the latter has a very differently shaped prothorax (see p. 338).

284. **Myllocerus zeylanicus**, sp. nov.

Colour dark ferruginous, with grey or pale grey-green scaling which is very sparse above and much denser on the sides and under surface.

Head minutely striolate (beneath the scaling), the eyes lateral and large, the forehead about as broad as the space between the scrobes. *Rostrum* a little longer than the head and about as long as broad, the sides narrowed from the base to the middle and slightly dilated at the apex, the apical emargination moderately deep and forming an acute angle; the upper surface shallowly impressed, with faint lateral carinæ and a very fine central carina which ascends the forehead. *Antennæ* dark ferruginous; the funicle with the two basal joints equal and 3 evidently longer than 4, the terminal joints longer than broad; the club elongate, the first joint conical, as long as broad and not shorter than the second. *Prothorax* about as long as broad, the sides slightly rounded, shallowly constricted and transversely impressed towards the base and apex, the base subtruncate, the apical margin of equal width and oblique laterally, the upper surface closely punctate. *Elytra* subtruncate at the base, parallel-sided in the ♂, broader behind in the ♀, almost plane longitudinally, the shoulders roundly rectangular, deeply punctato-striate, the intervals with short, suberect, pale curved setæ. *Legs* dark ferruginous, the femora with a sharp tooth.

Length, $3\frac{1}{4}$–$4\frac{1}{4}$ mm.; breadth, $1\frac{3}{8}$–$1\frac{3}{4}$ mm.

CEYLON: Kandy, 1550–1700 ft. (*G. E. Bryant*, *G. Lewis*—type); Balangoda, 1770 ft., and Kitulgalle, 1700 ft. (*G. Lewis*).

Type in the British Museum.

285. **Myllocerus hispidus**, sp. nov.

Colour black, with slightly metallic green or grey-green scaling, which is rather thin above and denser laterally and beneath.

Closely allied to *M. zeylanicus*, Mshl., the description of which applies, except in the following particulars:—

Rostrum with the apical emargination rounded or obtusely angulate. *Antennæ* darker, thicker, the funicle with the terminal joints as long as broad; the club broader, the first joint strongly transverse and shorter than the second. *Elytra* with the setæ much longer, erect and black.

Length, $3\frac{3}{4}$–$4\frac{1}{2}$ mm.; breadth, $1\frac{3}{8}$–2 mm.

MADRAS: Coonoor, 5000–6000 ft. (*Maindron*); Naduvatam, 6000–6500 ft., Nilgiri Hills (*H. L. Andrewes*).

Type in the British Museum.

286. **Myllocerus angulatipes**, sp. nov.

Colour piceous, the upper surface with brown scaling, variegated with darker patches on the elytra; head with a broad lateral green stripe below the eye, which is continued along the thorax and elytra; on the latter the stripe is much broader, sometimes extending to stria 6 near the base and to stria 5 behind the middle, but always very irregular and variable; scutellum with dense pale green scaling. The pale lateral markings are sometimes greyish or coppery.

Head with fine striolation which is easily visible through the thin scaling, the eyes lateral and convex, the breadth of the forehead evidently greater than the length of the eye. *Rostrum* about as long as broad (♂) or slightly shorter (♀), evidently narrowed from the base to beyond the middle, the genæ strongly dilated, the apical emargination moderately deep and forming a sharp right angle; the upper surface with shallow confluent punctation, broadly and deeply impressed in the middle (especially in ♂), so that the edges of the dorsal area are costate in front, the central carina narrow and depressed. *Antennæ* testaceous brown, the scape with sparse minute pale scales and curved black setæ; the funicle with the two basal joints equal and 3 longer than 4, the terminal joints a little longer than broad. *Prothorax* transverse, the sides rounded, broadest at the middle, shallowly constricted and transversely impressed behind the apex and near the base, the latter truncate and not broader than the apex, which is rounded dorsally; the upper surface with coarse punctures, which are partly hidden by the scaling, and sometimes with a faint trace of a central costa. *Elytra* subtruncate at the base, parallel-sided (♂) or slightly dilated behind (♀), the dorsal outline almost flat; the upper surface with a small, transverse, flattened area just behind the scutellum, and behind this a very shallow, broad, oblique impression from the shoulder to the suture; the striæ with shallow punctures, the intervals slightly convex, the scaling not so dense as to hide the integument; the setæ short, black, scale-like and recumbent. *Legs* testaceous, with variegated scaling, the setæ dark on the outer faces only; the femora with a single sharp tooth, the anterior pairs of tibiæ with a prominent angulation on the inner edge above the middle, much less marked on the hind pair.

Length, 4–5 mm.; breadth, $1\frac{3}{4}$–2 mm.

CEYLON: Dikoya, 3800–4200 ft. (*G. Lewis*).

Types ♂ ♀ in the British Museum.

287. **Myllocerus lineatocollis**, *Boh.*

Phyllobius lineatocollis, Boheman,* Schönh. Gen. Curc. vii, pt. 1, 1843, p. 23.
Myllocerus frontalis, Faust,* Deut. Ent. Zeit. 1897, p. 363.
Myllocerus lineatocollis, Stebbing, Indian Forest Insects, 1914, p. 400, fig. 270.

Colour black or piceous, with metallic green scaling, the head with a variable central dark patch, the prothorax with a broad central dark stripe, the elytra uniform green (typical form); or the elytra with the suture black, the intervals 1 to 4 more or less variegated with black spots, and the remaining intervals uniformly green (var. *frontalis*).

Head with the eyes lateral and prominent, the forehead much broader than the space between the scrobes. *Rostrum* about as long as the head, broader than long, narrowing from the base to the middle and slightly dilated at the apex, the apical emargination shallow and rounded; the upper surface scarcely impressed and with only a short faint central stria. *Antennæ* reddish brown, the scape with depressed setæ, the funicle with the two basal joints equal, and 3 equal to 4. *Prothorax* a little broader than long, the sides slightly rounded, broadest about the middle, shallowly constricted before and behind, the base subtruncate, the apex of equal width and very oblique at the sides, the upper surface closely punctate. *Elytra* truncate at the base, the shoulders roundly rectangular, the sides parallel in the ♂, slightly dilated behind in the ♀, finely punctato-striate, with rather long erect dark setæ. *Legs* ferruginous, the femora darker, with green scaling and a small tooth.

Length, $2\frac{1}{4}$–4 mm.; breadth, $\frac{7}{8}$–$1\frac{1}{2}$ mm.

BOMBAY: N. Kanara (*T. R. D. Bell*). MADRAS: Nilgiris (*Sir G. Hampson*, *H. L. Andrewes*); Pondicherry (*Perrotet*); Madras. ASSAM: Goalpara, on *Bombax malabaricum* (*E. P. Stebbing*).

Type in the Stockholm Museum; of *M. frontalis* in the Dresden Museum.

After examining a fair series of both forms I am unable to distinguish *M. frontalis*, Fst., from Boheman's species except by the coloration of the elytra, which, however, appears to be very constant. All the specimens from Kanara and all those collected by Mr. Andrewes on the Coonoor side of the Nilgiris belong to the var. *frontalis*; while those from the remaining localities are of the typical form. Another colour variation also occurs in the Nilgiris.

M. lineatocollis var. **divisus**, nov.

Differs from the typical form in having the upper surface of the rostrum, head, prothorax, and the entire disk of the elytra as far as the fifth stria covered with uniform greyish-brown scaling, with the exception of a narrow line of green scales along the inner edge of the eyes and along the rostral emargination.

MADRAS: Northern Nilgiris (*Sir G. Hampson*); Ouchterlony Valley, 2500–3000 ft. (*H. L. Andrewes*).

Type in the British Museum.

288. **Myllocerus discoideus**, *Oliv.*

Curculio discoideus, Olivier, Entom. v, 83, 1807, p. 418, pl. 26, fig. 379.

Macrocorynus discoideus, Boheman, Schönh. Gen. Curc. ii, 1834, p. 433.

Colour red-brown, with grey or brownish scaling, and with pale greenish scaling on the following parts:—the sides and underparts of the head and prothorax, a narrow dorsal stripe on the latter, a narrow line along the suture and the extreme margin of the elytra, and a broader ill-defined stripe from the shoulder to the declivity. *Head* finely striolate, the eyes lateral and not very convex, the forehead broader than the space between the scrobes. *Rostrum* longer than the head, its sides narrowed from the base to the middle and dilated again at the apex, the apical emargination very shallow, the base of the epistome broadly rounded; the upper surface impressed and with a central furrow which is deep in front and shallow at the base, the lateral carinæ distinct. *Antennæ* thick, the scape gradually dilated; the funicle with joint 1 short, conical, and very broad at its apex, 2 longer and narrower, 3 to 7 short, transverse, and subequal, the club elongate and scarcely broader than the funicle. *Prothorax* transverse, the sides rounded, broadest slightly behind the middle, truncate at the base, the apex narrower and vertically truncate at the sides; the upper surface closely punctate and with a rounded impression on each side behind the middle. *Elytra* subtruncate at the base, the shoulders roundly rectangular, the sides subparallel to beyond the middle in the ♀, gradually narrowed from the shoulders in the ♂, the striæ distinctly punctate, the intervals with short subdepressed setæ. *Legs* stout, ferruginous, the femora with a single tooth.

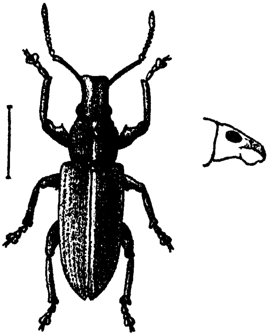

Fig. 97.—*Myllocerus discoideus*, Oliv.

Length, 5¾–7¼ mm.; breadth, 2½–3 mm.

BENGAL. CHINA. JAPAN.

Type in the Paris Museum.

289. **Myllocerus postfasciatus**, sp. nov.

Colour piceous, with light fawn scaling; the elytra with an irregular and ill-defined broad oblique dark brown band behind the middle, extending from stria 6 to the suture, and with some indistinct paler and darker markings in the basal half.

Head with the eyes subdorsal and only slightly convex, the forehead scarcely as broad as the eye, not broader than the space between the scrobes and with a short central stria. *Rostrum* rather longer than broad, longer than the head, the sides almost parallel in the basal half and dilated at the apex, the apical emargination very shallow, the base of the epistome rounded; the upper surface shallowly impressed and indistinctly bicarinate. *Antennæ* reddish brown; the funicle with joint 2 longer than 1, 3 and 4 equal. *Prothorax* a little longer than broad, almost cylindrical, the base subtruncate, the apex of equal width and vertically truncate at the sides; the upper surface with scattered punctures visible through the scaling and with a rounded impression on each side behind the middle. *Elytra* shallowly sinuate at the base, the shoulders rounded and rather sloping, the sides slightly dilated behind the middle, narrowly punctato-striate; the scaling dense, the setæ very short and subdepressed. *Legs* rufescent, with pale scaling, the femora with a single sharp tooth.

Length, 3 mm.; breadth, 1½ mm.

BURMA: Mt. Mouleyit, 6000 ft., Tenasserim (*Fea*).

Type in the Genoa Museum.

290. **Myllocerus dorsatus**, *F.*

Curculio dorsatus, Fabricius,* Ent. Syst. Suppl. 1798, p. 173; Boheman, Schönh. Gen. Curc. vii, pt. 1, 1843, p. 6.

Myllocerus tesserula, Faust,* Deut. Ent. Zeit. 1897, p. 365.

Colour piceous, with green, golden green, or golden yellow scaling, and brown or blackish markings; the head with a dark patch on the vertex; the prothorax with three narrow dark stripes, the centre one being the narrowest; the elytra mottled on the disk with very variable confluent dark spots, but the suture always with green or yellow scaling.

Head minutely aciculate, the eyes lateral, the forehead a little broader than the space between the scrobes. *Rostrum* about as long as the head, broader than long, the sides narrowed from the base to the middle and scarcely dilated at the apex, the apical emargination very deep and forming an acute angle; the upper surface shallowly impressed and with a fine central carina, which ascends the forehead. *Antennæ* very long and slender, the scape abruptly clavate; the funicle with joint 2 a little longer than 1, 3 and 4 subequal. *Prothorax* slightly broader than long, the sides rounded, broadest at the middle, shallowly constricted before and behind, the basal margin truncate, not broader than the apical, which is oblique at the sides, closely punctate above, and often with a faint central carina in the basal half. *Elytra* subtruncate at the base, the shoulders roundly rectangular, the sides slightly dilated behind the middle, finely punctato-striate, the intervals with rather long and fine erect setæ. *Legs* flavescent, the femora with a small sharp tooth.

Length, 4–4½ mm.; breadth, 1¾–2 mm.

MADRAS: Teppukadu, Nilgiri Hills, 2500 ft. (*H. L. Andrewes*); Pondicherry (*Perrotet*); Madura (*C. Barton Wright*); Bangalore

(*J. Cameron*—Ind. Mus.); Tanjor. BOMBAY: Bagewadi, Belgaum (*H. V. Kemball*). CENTRAL PROVINCES: Nagpur (*Lefroy*). BENGAL: Calcutta (*F. H. Gravely*—Ind. Mus.); Pusa.

Type in the Copenhagen University Museum; type of *M. tesserula* in the Dresden Museum.

Among some examples in the Brussels Museum labelled "Ind. Bor. (*Bacon*)" there is one in which the central dark stripe on the prothorax is broadly interrupted by green scaling, and another in which this stripe is entirely absent. *M. tesserula*, Fst., was described from two specimens of which I have seen one in Mr. Andrewes' collection. It agrees entirely with *M. dorsatus* except in colour, the ground-colour being red-brown and the green scaling replaced by pinkish grey; the example is perhaps immature.

The perfect insect has been found attacking the leaves of the Sword Bean (*Canavalia*).

291. Myllocerus tenuicornis, *Fst.*

Myllocerus tenuicornis, Faust,* Stett. Ent. Zeit. 1891, p. 267.

Very closely allied to *M. dorsatus*, F., and differing only in the following characters:—The scape rather more slender and more abruptly clavate, the second joint of the funicle a little longer in proportion to the first, the third longer than the fourth; the anterior constriction of the prothorax very slight, the posterior one much more pronounced, so that the basal margin is a little narrower than the apical.

MADRAS: Nilgiris (*Sir G. Hampson*); Madura (*R. Barton Wright*). CENTRAL PROVINCES: Nagpur (*E. d'Abreu*, *Hauser*—type). BENGAL: Ranchi, Chota Nagpur (*Irvine*—Ind. Mus.).

Type in the Dresden Museum.

292. Myllocerus conspersus, sp. nov.

Another close ally of *M. dorsatus*, F., agreeing with it in colour, except that the three dark lines on the prothorax are much less distinct.

The structural characters are also the same as those given for *M. dorsatus*, except as follows:—*Head* with the eyes less convex. *Rostrum* with the apical emargination shallow, the angulation being not less than a right angle. *Antennæ* much thicker, the scape more gradually thickened, joint 3 of the funicle longer than 4. *Elytra* with the setæ much shorter and suberect.

Length, 3–3½ mm.; breadth, 1¼–1⅝ mm.

MADRAS: Nilgiri Hills (*H. L. Andrewes*).

Type in the British Museum.

293. **Myllocerus crinitus**, sp. nov.

Colour black, with pale metallic green scaling; the prothorax with two ill-defined darker stripes; the elytra variegated on the disk with irregular and variable small brown markings.

Head with the eyes lateral and prominent, the forehead finely striolate beneath the scaling and broader than the space between the scrobes. *Rostrum* about as long as broad, longer than the head, the sides very slightly narrowed from the base to the middle and slightly dilated again at the apex, the apical emargination moderately deep and acute; the upper surface impressed and indistinctly tricarinate. *Antennæ* piceous, slender, the scape with depressed setæ, the funicle with joint 2 longer than 1, 3 and 4 subequal. *Prothorax* about as long as broad, the sides slightly rounded, broadest at the middle, shallowly constricted before and behind, the apical margin oblique laterally, the base of equal width and truncate, the upper surface coarsely punctate. *Elytra* subtruncate at the base, the shoulders rectangular, the sides parallel to beyond the middle in the ♂, slightly dilated behind in the ♀, finely punctato-striate and with very long fine erect setæ. *Legs* black, with some green scaling, the femora with a single sharp tooth.

Length, 3½–4½ mm.; breadth 1¼–2 mm.

MADRAS: Kallar, 1000 ft., Nilgiri Hills (*H. L. Andrewes*).

Type in the British Museum.

294. **Myllocerus pauper**, *Fst.*

Myllocerus pauper, Faust,* Deut. Ent. Zeit. 1897, p. 365.

Colour piceous black, with grey scaling and indistinct brownish markings; the under-parts whitish.

Head finely striolate, the eyes lateral and prominent, the forehead broader than the space between the scrobes. *Rostrum* about as long as the head, shorter than its basal width, its sides narrowed from the base to the middle and slightly dilated at the apex, the apical emargination moderate and forming an obtuse angle; the upper surface rather deeply impressed and with a fine central carina, the lateral carinæ not evident. *Antennæ* ferruginous, the funicle with joint 2 evidently longer than 1, and 3 slightly longer than 4. *Prothorax* a little broader than long, the sides very slightly rounded, broadest rather before the middle, the base truncate, the apical margin scarcely narrower and oblique at the sides, the punctation rugose and confluent. *Elytra* subtruncate at the base, parallel-sided in the ♂, slightly widened behind in the ♀, the shoulders roundly rectangular, the striæ rather deep and strongly punctate, the setæ moderately long and erect. *Legs* ferruginous, the femora with a small sharp tooth.

Length, 3⅛–3¾ mm.; breadth, 1⅛–1⅝ mm.

BOMBAY: Khanapur and Sampgaon, Belgaum (*H. E. Andrewes*).

Type in the Dresden Museum.

295. Myllocerus gracilis, sp. nov.

Colour black, with metallic green scaling, the elytra usually with some small scattered denuded black spots.

Head finely wrinkled, with the eyes lateral and prominent, the forehead only slightly broader than the space between the scrobes. *Rostrum* broader than long, as long as the head, slightly narrowed from the base to the middle and a little dilated at the apex, the apical emargination deep and forming an acute angle; the upper surface shallowly impressed and with only a faint central carina. *Antennæ* black, slender, the funicle with joint 2 much longer than 1, 3 and 4 equal. *Prothorax* almost as long as broad, nearly cylindrical, the base subtruncate, the apical margin oblique laterally; the upper surface with coarse punctation visible through the scaling. *Elytra* subtruncate at the base, the shoulders rectangular, the sides parallel in the ♂, evidently dilated behind in the ♀, finely punctato-striate, with very short suberect setæ. *Legs* piceous, or ferruginous with the thickened part of the femora darker, the latter with a single sharp tooth.

Length, 3–4 mm.; breadth, $1\frac{1}{8}$–$1\frac{5}{8}$ mm.

MADRAS: Nilgiri Hills (*H. L. Andrewes*).

Type in the British Museum.

296. Myllocerus smaragdinus, sp. nov.

Colour black, with uniform bright metallic green scaling, which is not very dense.

Head with the eyes lateral and only slightly convex, the forehead finely striolate and much broader than the space between the scrobes. *Rostrum* as long as broad, longer than the head, the sides subparallel in the basal half, dilated at the apex, the apical emargination moderately deep and forming an acute angle, the upper surface impressed and finely tricarinate. *Antennæ* rufescent and with stiff projecting setæ, the scape rather scabrous; the funicle with joint 2 longer than 1, 3 and 4 equal. *Prothorax* about as long as broad, the sides rounded, broadest at the middle, shallowly constricted before and behind, the base subtruncate, not broader than the apical margin, which is slightly oblique laterally; the upper surface coarsely punctate. *Elytra* as in *M. lineatocollis* (the scutellum bare in both), but with very dense short erect setæ. *Legs* dark ferruginous, the thickened part of the femora darker, with green scaling and with a single sharp tooth.

Length, $3\frac{1}{2}$–4 mm.; breadth, $1\frac{1}{4}$–$1\frac{3}{4}$ mm.

SIKKIM: Darjiling (*Harmand*, *Fruhstorfer*); Jalapahar (*E. T. Atkinson*—type).

Type in the British Museum.

297. Myllocerus procerus, *Fst.*

Myllocerus procerus, Faust,* Deut. Ent. Zeit. 1897, p. 368.

Colour piceous, with brownish-grey scaling, the prothorax with a darker stripe on each side, the elytra variegated with small darker markings.

Head impunctate and with a small frontal fovea, the eyes lateral, the forehead broader than the space between the scrobes. *Rostrum* evidently longer than the head, as long as broad, its sides narrowed from the base to near the apex, then slightly dilated, the apical emargination shallow and forming an obtuse angle; the upper surface shallowly impressed, with a faint central carina, the lateral carinæ distinct. *Antennæ* ferruginous, the scape with suberect setæ, the funicle with joint 2 evidently longer than 1, 3 and 4 subequal. *Prothorax* about as long as broad, its sides slightly rounded, broadest at the middle, shallowly constricted before and behind, the base subtruncate, a little broader than the apex, which is obliquely truncate laterally, the punctation deep and easily visible through the scaling. *Elytra* elongate, parallel-sided, the shoulders roundly rectangular, the striæ finely punctate, the setæ moderately long and suberect. *Legs* ferruginous, with the apical half of the femora piceous, the femora bidentate, the posterior tibiæ emarginate internally at the base, the anterior pairs with a sharp internal angulation.

Length, 4¾–5¼ mm.; breadth, 2–2⅛ mm.

BOMBAY: Khanapur and Ghozeb, Belgaum (*H. E. Andrewes*).

Type in the Dresden Museum.

298. **Myllocerus brachycollis**, *Fst.*

Myllocerus brachycollis, Faust,* Ann. Mus. Civ. Genova, xxxiv, 1894, p. 195 (1895).

Colour piceous, with pale greenish scaling, the elytra with faint irregular darker markings.

Head very broad, the eyes subdorsal, slightly transverse and almost flat, the forehead broad, yet scarcely broader than the space between the scrobes. *Rostrum* very stout, about as long as broad, longer than the head, very much thickened dorso-ventrally towards the apex and separated inferiorly from the head by a transverse furrow which extends almost to the lower edge of the eye, the sides almost straight and parallel, not dilated at the apex, the apical emargination broad, deep and acute; the upper surface plane, with a fine central stria and two short carinæ on each side, the scrobes widely separated. *Antennæ* ferruginous, the scape with sparse erect setæ, the funicle with joints 1 and 2 subequal, 3 slightly longer than 4. *Prothorax* broader than long, the sides parallel from the apex to the middle, then strongly narrowed to the base, which is deeply bisinuate, the apical margin almost vertical laterally; the upper surface with scattered deep punctation visible through the scaling and with a transverse fovea on each side behind the middle. *Elytra* separately rounded at the base, the shoulders roundly rectangular, the sides evidently dilated behind the middle (♀ only?), finely punctato-striate, the setæ moderately long, fine and erect; scutellum bare. *Legs* ferruginous, with thin scaling, the femora with a rather long sharp tooth, further from the apex than usual.

Length, 3¼ mm.; breadth, 1⅝ mm.

BURMA: Karen Hills, 3000–3500 ft. (*Fea*).

Type in the Genoa Museum.

299. **Myllocerus madurensis**, sp. nov.

Colour piceous, with grey scaling; the prothorax with three ill-defined darker lines, sometimes merging over the whole disk; the elytra mottled on the disk with irregular and variable brown markings.

Head with the eyes subdorsal and almost flat, the forehead narrower than the width of the eye and not broader than the space between the scrobes. *Rostrum* broader than long, about as long as the head, the sides straight and slightly narrowing from base to apex, the emargination rather shallow and forming a right angle; the upper surface impressed, with a faint central and distinct lateral carinæ, the space between them scarcely broader than the lateral areas as seen from above. *Antennæ* red-brown, with pale scaling; the funicle with joint 1 slightly longer than 2, and 3 equal to 4. *Prothorax* a little broader than long, the sides very slightly rounded, broadest slightly behind the middle, the base bisinuate, the apical margin a little narrower and oblique laterally; the upper surface with faint scattered punctation showing through the scaling and with a small rounded impression on each side behind the middle. *Elytra* comparatively short and broad, rather broadly rounded behind, the base with a small central sinuation, the shoulders roundly rectangular, the sides evidently dilated behind the middle (apparently in both sexes), the striæ finely punctate, the setæ scale-like and curved. *Legs* rufescent, with pale scaling, the femora with a small tooth.

Length, 2½-3 mm.; breadth, 1¼-1½ mm.

MADRAS: Madura (*C. Barton Wright*, *C. Somers Smith*); Koilpati (Pusa Coll.).

Type in the British Museum.

300. **Myllocerus minutus**, *Fst.*

Corigetus minutus, Faust,* Stett. Ent. Zeit. 1891, p. 268.

Colour black, with uniform dense greenish-white scaling.

Head with the eyes flattened, subdorsal, the forehead not broader than the space between the scrobes. *Rostrum* much broader than long, narrowed anteriorly, the sides almost straight; the upper surface broadly impressed, with a faint central and raised lateral carinæ, which are parallel. *Antennæ* testaceous red, with the scape almost straight, except at the base; the funicle with joint 1 longer than 2, joints 3–7 as long as broad. *Prothorax* bell-shaped, as long as broad, the sides rounded in front, sinuate behind the middle, and with the posterior angles acute, the base shallowly bisinuate and broader than the apex. *Elytra* subtruncate at the base, the shoulders obliquely subangulate, the sides somewhat dilated behind the middle, the striæ finely punctate, the intervals with a row of curved scale-like setæ. *Legs* testaceous red, with pale scaling, the femora with a small tooth.

Length, 2½ mm.; breadth, 1¼ mm.

CENTRAL PROVINCES: Nagpur (*Dr. G. Hauser*).

Type in the Dresden Museum.

301. **Myllocerus luctuosus**, *Desbr.*

Myllocerus luctuosus, Desbrochers des Loges,* C. R. Soc. Ent. Belg. 1891, p. ccclvii.

Colour black, with blackish scaling and distinct greyish-white markings; the rostrum with greyish scaling; the prothorax with a broad pale lateral stripe and a median oval paler spot near the anterior margin; the elytra with a narrow basal whitish band from the suture almost to the shoulder, a short subhumeral stripe at the base of intervals 9 and 10, a short sutural stripe near the base, a transverse band about the middle, which is narrower on intervals 2–5 and much broader on 6–8, being sometimes almost divided on interval 5, a larger subapical patch formed of longitudinal stripes of unequal length on intervals 2–9, that on 6 sometimes absent, and finally a short stripe at the apex of the suture; the under-parts with dense whitish scaling.

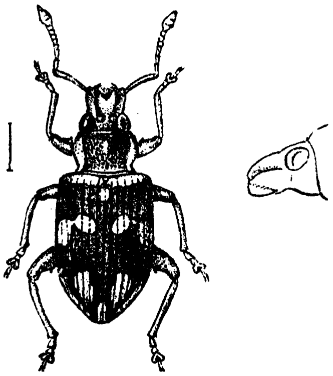

Fig. 98.—*Myllocerus luctuosus*, Desbr.

Head with the eyes very large, sublateral, strongly depressed and a little broader than the forehead, which is about equal to the space between the scrobes. *Rostrum* broader than long, a little longer than the head, its sides almost straight and parallel, the apical emargination rather shallow but acute; the upper surface very deeply and broadly impressed, without any central carina, but with the lateral carinæ sharply raised and slightly converging in front. *Antennæ* thick, piceous, with white depressed setæ, the scape finely scrobiculate; the funicle with joint 1 a little longer than 2, 3–7 subequal and about as long as broad. *Prothorax* much broader than long, the sides rounded, broadest at the middle, shallowly constricted before and behind, the posterior angles rather acute, the base shallowly bisinuate, the apex scarcely narrower and oblique at the sides; the upper surface confluently granulato-punctate. *Elytra* broad, subtruncate at the base, the shoulders roundly rectangular, the sides subparallel, the striæ broad and deeply punctate, the intervals finely rugose and with distinct granules on the dark areas; the setæ scale-like and quite recumbent, so that they can be distinguished only with difficulty from the true scales. *Legs* piceous, with grey scaling, the femora with a small tooth.

Length, 4–4½ mm.; breadth, 2–2¼ mm.

BENGAL: Chota Nagpur (*Cardon*).

Type in the Brussels Museum.

302. **Myllocerus tenuiclavis**, sp. nov.

Colour black, with fawn-coloured scaling; the prothorax with a broad dark stripe on each side; the elytra with irregular dark dorsal markings.

Head with a deep frontal fovea or furrow, the eyes sublateral, less convex in the ♀, the forehead slightly broader than the space between the scrobes. *Rostrum* about as long as broad, evidently longer than the head, the sides narrowed from the base to the middle and rather strongly dilated at the apex, the apical emargination not very deep and forming a right angle, impressed above and with a deep central furrow throughout, the lateral carinæ distinct, the shallow posterior portion of the scrobe containing a short deep furrow in front of the eye. *Antennæ* piceous, the scape stout and gradually clavate at the apex; the funicle with joint 1 much longer than 2, 3 and 4 subequal and slightly longer than 5 to 7, the club very narrow and elongate, not broader than the funicle. *Prothorax* a little broader than long, its sides very slightly rounded, broadest rather before the middle, shallowly constricted before and behind, the base bisinuate, the apical margin of equal width and oblique laterally; the upper surface with distinct scattered punctures visible through the scaling and with a rounded impression on each side behind the middle. *Elytra* separately rounded at the base, the sides slightly dilated behind the middle, the shoulders roundly rectangular, the striæ strongly punctate, the setæ very short and depressed. *Legs* piceous, with grey scaling; the femora with a stout sharp tooth, which is unusually large on the posterior pair, the tibiæ simple.

Length, 5–5½ mm.; breadth, 2⅛–2⅜ mm.

MADRAS: Nilgiri Hills (*Sir G. Hampson, H. L. Andrewes*); Anamalai Hills, 3500–4000 ft. (*H. L. Andrewes*).

Type in the British Museum.

The large femoral tooth, the unusual length of the first joint of the funicle, and the narrow antennal club form a combination of characters which will make the species readily recognisable from its congeners.

M. tenuiclavis var. **inferior**, nov.

This is apparently a "plains" form of *M. tenuiclavis*, and is characterised by its consistently smaller size and almost uniformly grey or brownish-grey colouring, the dark stripes on the prothorax being evanescent or entirely absent.

Length, 3–3¾ mm.; breadth, 1¼–1¾ mm.

MADRAS: Madura (*C. Somers Smith*); Pondicherry and Genji (*Maindron*); Bellary (*de Morgan*); Madakasira Forests, Anantapur dist. (*Ramakrishna*). BENGAL: Chota Nagpur (*Cardon*).

Type in the British Museum.

303. **Myllocerus fabricii**, *Guér.*

Myllocerus fabricii, Guérin,* Voy. Deless. ii, 1843, p. 53; Boheman, Schönh. Gen. Curc. vii, pt. 1, 1843, p. 8.

Corigetus exaptus, Faust,* Stett. Ent. Zeit. 1886, p. 143 (n. syn.).

Colour black, with almost uniform grey or brown scaling above, or brown with ill-defined confluent grey spots; the sides and under-parts pale grey.

Head shallowly impressed in the middle, the eyes large and lateral, as wide as the forehead, which is about equal to the space between the scrobes. *Rostrum* comparatively narrow, about as long as broad, a little longer than the head, the sides straight and almost parallel, shallowly impressed above and with a narrow depressed bare carina, which ascends the forehead. *Antennæ* piceous, with grey scaling; the funicle with joints 1 and 2 short

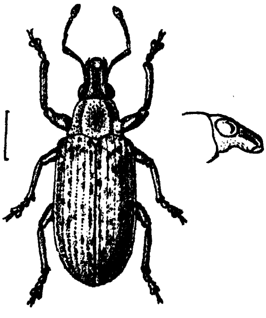

Fig. 99.—*Myllocerus fabricii*, Guér.

and subequal, 3 scarcely longer than 4. *Prothorax* subconical, shorter than its basal width, broadest at the base and strongly narrowed to the apex, the sides being slightly sinuated behind the middle, the basal margin deeply bisinuate, the external angles acute, with large scattered punctures above and sometimes with a faint central carina in the anterior half. *Elytra* comparatively broad, the shoulders rather sloping, finely punctato-striate (when the scaling is intact), the setæ very short and depressed, scarcely discernible on the disk. *Legs* piceous, with grey scaling, all the femora with a single small tooth.

Length, 4½–6 mm.; breadth, 2–2¾ mm.

MADRAS: Pondicherry (*Perrotet*); Madura (*R. Barton Wright*); on *Acacia*, Bergwada (Pusa Coll.); Bangalore, 3000 ft. (*Anstead*—Pusa Coll.); on *Casuarina*, Waltair (*E. P. Stebbing*—Ind. Mus.); Chatrapur, Ganjam (*E. P. Stebbing*). BENGAL: Angul, Orissa (*J. Taylor*—Ind. Mus.).

Type in the Stockholm Museum.

Corigetus exaptus, Fst., is indistinguishable from this species.

304. **Myllocerus lateralis**, *Chev.*

Myllocerus lateralis, Chevrolat,* Le Natural. ii, 1882, p. 93.

Colour piceous; the head and prothorax with dense green scaling, the latter with three indistinct subdenuded darker stripes, the central one being narrower; the elytra with the suture pale green throughout, the intervals 2–4 and the basal half of 5 and 6 with brownish scales intermixed with a few green ones, the lateral intervals and the apices of 5–6 pale metallic green; the underparts entirely green.

Head with the eyes lateral and convex, the forehead broader than the space between the scrobes and without any furrow or carina. *Rostrum* about as long as broad, not longer than the head, narrowed from the base to the middle and strongly dilated at the apex, the apical emargination rather shallow and rounded; the upper surface almost plane, subcarinate above the scrobe and with a faint central stria. *Antennæ* piceous, with pale scaling, the scape stout and gradually clavate; the funicle with joint 1 evidently longer than 2, 3–7 subequal. *Prothorax* broader than long, the sides rounded, broadest at the middle, the base shallowly bisinuate, the apex scarcely narrower and obliquely truncate at the sides; the upper surface with deep separated punctures which are visible through the scaling. *Scutellum* transverse and squamose. *Elytra* subtruncate at the base, the shoulders roundly subrectangular, the sides parallel to beyond the middle, narrowly but deeply punctato-striate, the intervals plane and broader than the striæ, with dense scaling and without appreciable setæ. *Legs* piceous, with greenish scaling, the femora with a single small tooth.

Length, 4–4½ mm.; breadth, 1⅝–2 mm.

ANDAMAN ISLANDS (*Roepstorff*).

Type in the Stockholm Museum.

305. **Myllocerus lætivirens**, sp. nov.

Colour piceous, with uniform pale metallic green scaling.

Head with the eyes lateral, shortly oval, and rather prominent, the forehead much broader than the space between the scrobes. *Rostrum* about as long as the head, broader than long, somewhat narrowed from the base to the middle, and only slightly dilated at the apex, the emargination very shallow and broadly rounded; the upper surface shallowly impressed, with a faint central carina, the lateral carinæ distinct. *Antennæ* rufescent, with dense pale scaling; the funicle with joint 1 longer than 2, 3 and 4 equal. *Prothorax* transverse, the sides gently rounded, the base a little broader than the apex and deeply bisinuate, the apical margin oblique laterally; the upper surface with a shallow transverse impression on each side at the base and apex, the punctation scarcely visible through the scaling. *Elytra* comparatively short and broad, separately rounded at the base, the shoulders rounded and rather sloping, the sides slightly widened behind the middle, the punctures in the striæ appearing very fine through the scaling, the setæ broad, curved, and suberect; the scutellum with green scaling. *Legs* flavescent, with pale scaling, the femora with a small tooth.

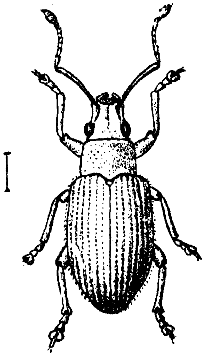

Fig. 100.—*Myllocerus lætivirens*, Mshl.

Length, $3\frac{3}{8}$–$3\frac{1}{2}$ mm.; breadth, $1\frac{3}{4}$ mm.

PUNJAB: Lahore (*Lefroy*—Pusa Coll.).

Type in the British Museum.

306. **Myllocerus tusicollis**, sp. nov.

Colour red-brown, with uniform pale coppery-green scaling.

Very closely allied to *M. lætivirens*, Mshl., from which it differs in the following characters:—

Head with the eyes distinctly larger proportionately. *Rostrum* a little longer in proportion to its basal width, the median dorsal area less widened behind and less deeply impressed near the apex. *Prothorax* much more broadly impressed on each side of the disk, and with indications of an obtuse central ridge. *Elytra* with the shoulders somewhat less oblique, the intervals with quite inconspicuous, very short, recumbent setæ.

Length, 3 mm.; breadth, 1½ mm.

MADRAS: Palur, on *Hibiscus cannabina* (Pusa Coll.).

Type in the British Museum.

307. **Myllocerus impressicollis**, sp. nov.

Colour black, with metallic green scaling above and below; the prothorax with a broad well-defined dark central stripe, and a narrow abbreviated lateral dark stripe on each side; the elytra with a sharply defined dark stripe on intervals 2 and 4 from near the base to behind the middle, that on 2 continuing a little further backwards, the suture with golden brown scaling throughout, interval 3 with golden green scaling on the disk.

Head with the eyes quite lateral and rather prominent, the forehead much broader than the space between the scrobes. *Rostrum* about as long as the head, broader than long, the sides rather narrowed from the base to the middle and slightly dilated at the apex, the apical emargination shallow, the base of the epistome being broadly rounded; the upper surface shallowly impressed and with a faint central carina, the external carinæ fairly distinct. *Antennæ* flavescent, the scape setose; the funicle with the two basal joints equal, and 3 slightly longer than 4. *Prothorax* about as long as broad, the sides slightly rounded, broadest at the middle, shallowly constricted before and behind, the apex obliquely truncate, not narrower than the base, which is bisinuate and with the angles acute; the upper surface almost plane and bounded laterally by an indistinct undulated costa, with a rounded impression on each side behind the middle, the two being united by a shallow curved transverse impression, the punctation not visible through the scaling, the setæ very short but erect. *Elytra* separately rounded at the base, the shoulders prominent but rather sloping, the sides subparallel, the striæ narrow but distinctly punctate, the setæ short, inconspicuous and slightly raised. *Legs* flavescent, the femora with a very small tooth, the tibiæ simple.

Length, 3–3½ mm.; breadth, 1⅜ mm.

ASSAM: Goalpara (*E. P. Stebbing*).

Type in the British Museum.

The species is apparently liable to local colour modifications.

M. impressicollis var. **ephippiatus**, nov.

In this form the upper surface of the rostrum, head, and prothorax are brown, with a slightly darker central stripe on the latter; the elytra have a discal brown patch extending from the suture to the fourth stria, and continuing thus from the base to beyond the middle, then narrowing rapidly to a point at the top of the declivity.

Length, 3–4¼ mm.; breadth 1⅜–1¾ mm.

BENGAL.

Type in the British Museum.

M. impressicollis var. **gestroi**, nov.

The central black stripe on the prothorax is continued on to the head as far as the base of the rostrum. The suture of the elytra is clothed with pure green scaling from the base to the top of the declivity, from there to the apex it is black; the scaling on interval 3 is pure green.

BURMA: Teinzo (*Fea*).

Type in the Genoa Museum.

Faust was apparently of the opinion that the unusual structure of the thorax in this species should exclude it from *Myllocerus*.

308. **Myllocerus echinarius**, sp. nov.

Colour black, with dense metallic green scaling above and below, the prothorax with a central longitudinal black stripe.

Head striolate beneath the scaling and with a central fovea, the forehead much broader than the interscrobal space, the eyes lateral and prominent. *Rostrum* about as long as the head, evidently broader than long, narrowed from the base to the middle and thence dilated to the apex; the upper surface broadly impressed, the lateral carinæ fairly strong, the central carina faint, the apical emargination shallow and rounded. *Antennæ* blackish, the scape with a few greenish scales and recumbent pale setæ; the funicle with the two basal joints equal, 3 equal to 4, and the terminal joints longer than broad. *Prothorax* transverse, the sides gently rounded, the lateral constrictions indistinct, the basal margin deeply bisinuate, not broader than the apical, which is rounded dorsally and oblique at the sides; the upper surface with the punctation hidden by the scaling, the dark denuded central stripe shagreened, a rounded impression on each side near the base. *Elytra* separately rounded at the base, somewhat dilated behind the middle (♀), the shoulders roundly rectangular; the striæ rather broad, with shallow punctures and almost entirely free from scaling; the intervals almost plane, each with a single row of very stout erect brownish bristles; the green scales small, circular, convex and closely set. *Legs* with dense green scales and recumbent pale setæ, all the femora with a single small tooth.

Length, 3 mm.; breadth, 1 mm.

BURMA: Maymyo (*H. L. Andrewes*).

Type in the British Museum.

309. **Myllocerus manipurensis**, sp. nov.

Colour piceous, with light brownish scaling, usually more or less mingled with green scales, the elytra with the suture paler in the basal half.

Head with the eyes lateral and rather prominent, the forehead much broader than the space between the scrobes. *Rostrum* broader than long, almost parallel-sided, the apical emargination shallow and rounded; the upper surface not impressed, the three carinæ scarcely perceptible. *Antennæ* red-brown, rather short, the scape with erect setæ; the funicle with joints 1 and 2 equal, the terminal joints transverse, the club rather broadly ovate. *Prothorax* a little broader than long, the sides slightly rounded, broadest about the middle, shallowly constricted before and behind, the base bisinuate, the apical margin of equal width and oblique laterally; the upper surface with a rounded impression on each side behind the middle, the punctation scarcely visible through the scaling. *Elytra* separately rounded at the base, the shoulders roundly rectangular, the sides dilated behind the middle, the striæ narrow and finely punctate, the setæ short, stiff, and obliquely raised; the scutellum squamose. *Legs* rufescent, with thin pale scaling, the femora with a small tooth.

Length, $2\frac{3}{8}$–$2\frac{5}{8}$ mm.; breadth, 1–$1\frac{1}{8}$ mm.

ASSAM: Manipur (*Doherty*—type); Ukhrul, 6400 ft., Manipur (*Rev. W. Pettigrew*—Ind. Mus.).

Type in the British Museum.

310. **Myllocerus blandus**, *Fst.*

Myllocerus blandus, Faust,* Ann. Mus. Civ. Genova, xxxiv, 1894, p. 197 (1895).

Colour black, with dense greyish scaling; the elytra usually with two irregular whitish patches, one before, the other behind the middle, and also with some small darker spots.

Head with the eyes entirely lateral, the forehead twice as broad as the space between the scrobes. *Rostrum* as long as broad, a little longer than the head, its sides slightly narrowed from the base, but not dilated at the apex, the apical emargination very shallow, the upper surface with a broad central furrow. *Antennæ* flavescent, rather short; the funicle with the two basal joints equal, the remaining joints very short and all of about equal length. *Prothorax* as long as broad, its sides rounded, broadest at the middle, shallowly constricted and transversely impressed in front and behind, the base shallowly bisinuate, not broader than the apex, which is obliquely truncate; the upper surface rather uneven and coarsely punctate. *Elytra* jointly sinuate at the base, the shoulders subrectangular, the sides slightly dilated behind the middle, the punctures in the striæ scarcely visible through the scaling, the intervals with broad, erect, white scale-like setæ. *Legs* flavescent, with dense pale scaling, the femora with a small tooth.

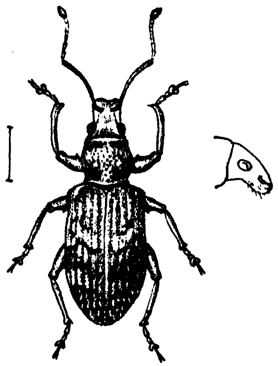

Fig. 101.—*Myllocerus blandus*, Fst.

Length, $2\frac{1}{2}$-3 mm.; breadth, 1-$1\frac{3}{8}$ mm.

MADRAS: Machavaram, Godavari dist. BENGAL: Pusa (*Lefroy*); Dacca (Pusa Coll.); Siripur (Ind. Mus.); Sarda (*F. W. Champion*). BURMA: Prome (*Corbett*); Mandalay and Yenang-Yaung (*Fea*).

Type in the Genoa Museum.

311. **Myllocerus ineptus**, sp. nov.

Colour black. The specimens are much rubbed, but the scaling is apparently of a uniform grey colour.

Head punctate, with the sculpturing hidden by scaling, the eyes lateral and prominent, the forehead much broader than the space between the scrobes, with a fine low central carina. *Rostrum* about as long as the head, shorter than the basal width, slightly narrowed from base to apex, the sides almost straight, not dilated in front, the apical emargination rather deep and forming an acute angle; the upper surface moderately impressed, with a low central and higher lateral carinæ. *Antennæ* red-brown; the funicle with joint 2 longer than 1, and with 3 distinctly longer than 4. *Prothorax* transverse, the sides almost parallel from the apex to the middle, then strongly constricted, the basal margin being slightly narrower than the apical and very shallowly bisinuate, the apical margin oblique laterally; the upper surface coarsely punctate, but the sculpture hidden by the scaling, a broad and deep transverse impression at the base. *Elytra* truncate at the base, the shoulders rather more sharply angulate than usual, the striæ shallow and distinctly punctate, the intervals flat and with very short recumbent setæ. *Legs* piceous, the femora with a very small, and sometimes indistinct, additional tooth.

Length, 3¼–4 mm.; breadth, 1¼–1¾ mm.

Madras: Anamalai Hills, 3500–4000 ft. (*H. L. Andrewes*).

Type in the British Museum.

312. **Myllocerus suavis**, *Fst.*

Myllocerus suavis, Faust,* Deut. Ent. Zeit. 1897, p. 361.

Colour black or piceous, with metallic green scaling; the prothorax with a broad denuded central stripe, the elytra with irregular darker denuded spots on the disk.

Head with the eyes subdorsal, the forehead not broader than the space between the scrobes. *Rostrum* about as long as the head, its sides narrowed from the base to the middle, and dilated at the apex, the apical emargination shallow and forming an obtuse angle; the upper surface plane and with a very fine central carina which ascends the forehead. *Antennæ* rufescent and with fine erect setæ: the funicle with joint 2 longer than 1, and 3 slightly longer than 4. *Prothorax* transverse, the sides slightly rounded, broadest at the middle, shallowly constricted before and behind, the apical margin oblique at the sides and not narrower than the base, which is shallowly bisinuate, with the posterior angles acute; the upper surface closely punctate and with short erect setæ. *Elytra* subtruncate at the base, the shoulders roundly rectangular, the sides slightly dilated behind, finely punctato-striate, the intervals with fairly long, dense, pale erect setæ. *Legs* flavescent, the femora with a few green scales and a minute tooth.

Length, 3–3½ mm.; breadth, 1¼–1⅜ mm.

Bombay: N. Kanara (*T. R. D. Bell*).

Type in the Dresden Museum.

313. **Myllocerus necopinus**, sp. nov.

Colour black, with dark brown scaling on the upper surface, the elytra mottled with grey; the sides and under-parts with uniform grey scaling.

Head with the eyes lateral and strongly convex, the forehead very broad and flat, with a distinct central fovea. *Rostrum* evidently transverse in the ♀, rather longer in the ♂, slightly narrowed from the base to beyond the middle and dilated at the apex, the apical emargination rather shallow, but the bordering carinæ forming an acute angle; the median dorsal area bounded on each side by a distinct obtuse ridge and gradually widening behind, broadly impressed in its anterior half and containing a low narrow central carina, the space between the scrobes much narrower than the forehead. *Antennæ* piceous; the scape moderately curved, gradually clavate, and with recumbent setæ; the funicle with joints 1 and 2 subequal, 3 scarcely longer than 4. *Prothorax* much broader than long and markedly convex, the sides moderately rounded, broadest at the middle, with a distinct basal constriction, the basal angles acute, the apical margin vertical at the sides and about as broad as the base, which is distinctly bisinuate; the upper surface rather rugosely punctate, the punctures merely indicated through the scaling, a shallow rounded impression on each side near the base. *Elytra* subtruncate at the base, the shoulders roundly rectangular, the sides slightly dilated behind the middle in both sexes; the striæ distinctly punctate, being for the most part free from scaling, stria 6 unusually long, being continued well past the humeral angle and almost reaching the base; the setæ short, dense, flattened and erect. *Legs* red-brown, with dense grey scales and setæ, all the femora with a single small tooth.

Length, 3½–4 mm.; breadth, 1¾–2 mm.

PUNJAB: Charsada, Peshawur dist. (Pusa Coll.).

Type ♂ in the British Museum.

314. **Myllocerus sabulosus**, sp. nov.

Colour black, with uniform sandy brown or dark brown scaling.

Head with the eyes sublateral and only slightly convex, the forehead evidently broader than the space between the scrobes and usually with a small central fovea. *Rostrum* broader than long, about as long as the head, the sides very slightly narrowed from the base to the middle and a little dilated at the apex, the emargination rather shallow but acute; the upper surface faintly impressed and tricarinate, the central carina very fine and ascending the forehead. *Antennæ* piceous, with dense grey scaling; the funicle with the two basal joints equal, and 3 not longer than 4. *Prothorax* transverse, the sides slightly rounded, faintly constricted near the base, the posterior angles acute, the apical margin vertical laterally and with a very small median sinuation dorsally, the base scarcely broader, shallowly bisinuate and with the central lobe itself slightly sinuate, the punctation not visible through the scaling. *Elytra* as in *M. suavis*, but with a deep common sinuation in the middle of the base, and set with short, curved, stiff subrecumbent setæ. *Legs* red-brown, with dense greyish scaling, the femora with a single tooth.

Length, 4¾–5⅛ mm.; breadth, 2–2⅜ mm.

BENGAL: Chota Nagpur (*Cardon*); on ber, Pusa (*H. M. Lefroy*—type); Purneah (*C. A. Paiva*—Ind. Mus.); Ranchi (*Irvine*—Ind. Mus.). UNITED PROVINCES: Karwapani, Dehra Dun. MADRAS: on *Casuarina* (*E. P. Stebbing*).

Type in the British Museum.

Very like *M. dentifer*, F., in general appearance, but easily distinguished, among other characters, by having only one tooth on the posterior femora instead of three.

Mr. Lefroy informs me that this species devours the young leaves of the mango tree.

315. **Myllocerus transmarinus**, *Hbst.*

Curculio transmarinus, Herbst,* Käf. vi, 1795, p. 213, pl. 75, f. 1.
Myllocerus musculus, Boheman,* Schönh. Gen. Curc. ii, 1834, p. 429 (n. syn.).
Myllocerus bengalensis, Desbrochers des Loges,* C. R. Soc. Ent. Belg. xxxv, 1891, p. ccclvi (n. syn.).
Myllocerus molarius, Faust,* Stett. Ent. Zeit. 1891, p. 268, & 1893, p. 149 (n. syn.).
Myllocerus transmarinus, Stebbing, Indian Forest Insects, 1914, p. 402.

Colour black, with brown scaling, often faintly mottled with grey, the sides of the prothorax and elytra greyish; sometimes the entire upper surface is uniformly grey.

Head almost plane and scarcely punctate, the eyes lateral and much narrower than the forehead, which is a little wider than the space between the scrobes. *Rostrum* about as long as the head, narrowing a little from the base, then slightly dilated to the apex, shallowly impressed above and with a fine central carina which ascends the forehead. *Antennæ* piceous, with grey scaling; the two basal joints of the funicle subequal, 3 slightly longer than 4. *Prothorax* very short, strongly transverse, the sides moderately rounded, broadest about the middle, not constricted near the base, the basal margin faintly bisinuate and a little broader than the apex, the punctation deep and close, and more or less visible through the scaling. *Elytra* comparatively broad, the shoulders rather sloping, finely punctato-striate, the setæ very short and depressed, scarcely discernible on the disk. *Legs* piceous, with grey scaling, all the femora with a single small tooth.

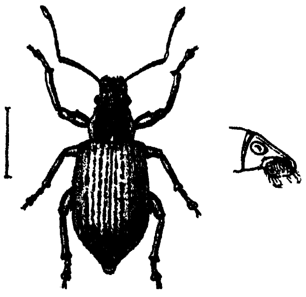

Fig. 102.—*Myllocerus transmarinus*, Hbst.

Length, 3½–5½ mm.; breadth, 1½–2¾ mm.

Punjab: on *Dalbergia sissoo*, Kulu and Bashahr States, Sutlej Valley, 2300–3500 ft. (*E. P. Stebbing*). United Provinces: Allahabad (*A. D. Imms*); Dehra Dun. Bengal: on *Zizyphus jujuba*, Calcutta (*F. H. Gravely*—Ind. Mus.); Sarda (*F. W. Champion*); on *Z. jujuba*, Pusa (*H. M. Lefroy*—Pusa Coll.); Barwa, Chota Nagpur (*Cardon*). Central Provinces: Nagpur, 1000 ft. (*E. d'Abreu*). Bombay: Poona; Ghozeh, Belgaum (*H. E. Andrewes*); N. Kanara (*T. R. D. Bell*). Madras: Genji (*Maindron*); Bellary (*de Morgan*).

Type in the Berlin Zoological Museum; type of *M. musculus* in the Stockholm Museum, of *M. bengalensis* in the Brussels Museum, of *M. molarius* in the Dresden Museum.

The insect assigned to *M. transmarinus*, Hbst., by Boheman is not this species, but *M. curvicornis*, F. In describing *M. musculus*, Boheman says that it has green scales mingled with the grey, but I cannot detect any such scales in his type-specimen.

316. **Myllocerus pubescens**, *Fst.*

Myllocerus pubescens, Faust,* Ann. Mus. Civ. Genova, xxxiv, 1894, p. 196 (1895).

Colour black, shiny, without scaling, but with fine grey pubescence and long erect pale setæ.

Head impunctate, the eyes lateral, the forehead rather broader than the space between the scrobes and with a central fovea.

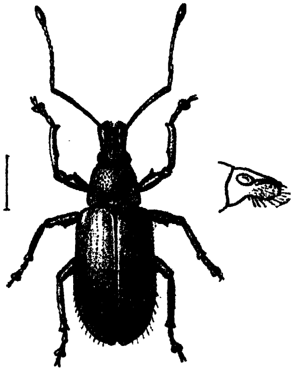

Fig. 103.—*Myllocerus pubescens*, Fst.

Rostrum a good deal longer than the head, rather longer than broad, the apical emargination shallow and rounded, with a broad longitudinal furrow above with carinate edges and containing a faint central carina. *Antennæ* black, the scape with suberect setæ; the funicle with the two basal joints equal, 3 to 7 subequal. *Prothorax* as long as broad, the sides subparallel in the basal half and strongly narrowed in front, the basal margin deeply bisinuate, the external angles acute, but not projecting laterally, the apical margin vertically truncate; the upper surface with scattered shallow punctures and short erect pubescence. *Elytra* separately rounded at the base, the shoulders rather sloping, the striæ shallow, with distinct separated punctures, the setæ long, fine and erect. *Legs* black, the femora with a single sharp tooth, the anterior pairs of tibiæ with an internal angulation at about one-third from the base.

Length, 4–5½ mm.; breadth, 1¾–2½ mm.

Burma: Rangoon (*Fea*—type); Tharrawaddy (*G. Q. Corbett*); Victoria Pt. (*Atkinson*). Bengal: Narainganj (*Lefroy*—Pusa Coll.); Sarda (*F. W. Champion*).

Type in the Genoa Museum.

317. **Myllocerus cardoni**, sp. nov.

Colour black, with harsh grey scaling, which is sometimes uniform, but the disk of the elytra is often variegated with irregular brown markings.

Head with the eyes sublateral and not very prominent, the forehead much broader than the space between the scrobes. *Rostrum* as long as the head, broader than long, the sides subparallel, the apical emargination deep and forming an acute angle; the upper surface almost plane and with a very fine central carina, the lateral carinæ distinct. *Antennæ* red-brown, the funicle with joint 2 longer than 1, and 3 slightly longer than 4. *Prothorax* much broader than long, the sides subparallel from the base to beyond the middle and shallowly constricted at the apex, the apical margin only slightly oblique at the sides, the base shallowly bisinuate and the external angles acute; the upper surface with close punctation which is not visible through the scaling. *Elytra* separately rounded at the base, parallel-sided, the shoulders rather sloping, the striæ (as seen through the scaling) narrow and strongly punctate, the setæ dense, stout, very short and subdepressed. *Legs* piceous, with dense grey scaling; the femora with a rather long sharp tooth and a much smaller one nearer the apex, the tibiæ shallowly emarginate internally at the base.

Length, 3¾–5 mm.; breadth, 1⅝–2⅜ mm.

Madras. Bengal: Chota Nagpur (*Cardon*), Calcutta (*Annandale*—Ind. Mus.). United Provinces: Dehra Dun (*Ollenbach*).

Type in the British Museum.

318. **Myllocerus subglaucus**, sp. nov.

Colour black, with uniform pale greyish-green scaling.

Head with the eyes sublateral and not very convex, the forehead not broader than the space between the scrobes. *Rostrum* as long as broad, longer than the head, the sides subparallel in the basal half or slightly narrowing anteriorly, dilated at the apex, the emargination deep and acute; the upper surface plane and faintly tricarinate. *Antennæ* piceous, slender, the scape with depressed setæ; the funicle with joint 2 longer than 1, and 3 slightly longer than 4, the club narrowly elongate. *Prothorax* broader than long, the sides slightly rounded, broadest about the middle, the lateral constrictions scarcely observable, the base shallowly bisinuate, the apical margin a little narrower, with a slight dorsal sinuation and vertically truncate at the sides, the punctation concealed by the scaling. *Elytra* shallowly sinuate at the base, the shoulders roundly rectangular, the sides subparallel in the ♂, slightly dilated behind in the ♀, finely punctato-striate, the scaling dense, the setæ very short and depressed; the scutellum bare. *Legs* piceous, with thin scaling, the femora with a very small tooth.

Length, 3¾–5½ mm.; breadth, 1½–2½ mm.

Madras: Nilgiri Hills, 6000 ft. (*H. L. Andrewes*).

Type in the British Museum.

319. **Myllocerus spectator**, sp. nov.

Colour black, with uniform pale whitish-green scaling.

Head with the eyes large, subdorsal, almost circular and not very convex, the forehead narrower than the eye and scarcely as broad as the space between the scrobes. *Rostrum* about as broad as long, rather longer than the head, narrowing from the base to the middle and dilated again towards the apex, the apical emargination shallow and rounded; the upper surface shallowly impressed, with a faint central stria and fine lateral carinæ. *Antennæ* piceous, the scape with subdepressed setæ; the funicle with joint 2 much longer than 1, 3 and 4 equal. *Prothorax* scarcely broader than long, the sides almost straight and narrowing gradually from the base to the apex, the base deeply bisinuate, the apical margin slightly oblique at the sides, the upperside with the punctation faintly visible through the scaling and with a small fovea on each side behind the middle. *Elytra* each strongly rounded at the base, the shoulders forming a rounded obtuse angle, the sides subparallel, the striæ distinctly punctate, the setæ rather short, fine and suberect; the scutellum squamose. *Legs* piceous, with thin pale scaling, the femora with a sharp tooth.

Length, 4 mm.; breadth, 1¾ mm.

Assam: Patkai Hills (*Doherty*).

Type in the British Museum.

320. **Myllocerus lefroyi**, sp. nov.

Colour black or piceous, with light green scaling, the elytra with irregular subdenuded darker markings.

Head with the eyes lateral and rather prominent, the forehead about as broad as the space between the scrobes, shallowly impressed, not striolate, and with a depressed central carina. *Rostrum* almost as long as broad, longer than the head, its sides subparallel at the base and slightly dilated at the apex, the emargination not very deep and forming a right angle; the upper surface shallowly depressed and indistinctly tricarinate, with a well-marked transverse carina near the apex. *Antennæ* piceous, with pale recumbent setæ, without scaling; the scape stout, not clavate, more bent than curved; the funicle with joint 2 longer than 1, and 3 equal to (♂) or longer than 4 (♀). *Prothorax* subconical, rather broader than long, the sides scarcely rounded and broadest at the base in ♀, slightly rounded in the middle in ♂, the posterior angles acute, the base deeply bisinuate, the apical margin narrower, rounded dorsally and oblique laterally; the upper surface with the basal third deeply depressed, the coarse punctation visible through the scaling in the ♀, but not in the ♂. *Elytra* as in *M. spectator*, but with the setæ shorter, stiff, dense and almost erect. *Legs* piceous, with recumbent pale setæ and without scaling; the femora with a very small tooth, the front tibiæ bisinuate internally.

Length, 2¼–3⅛ mm.; breadth, 1⅛–1½ mm.

BENGAL: Pusa (*H. M. Lefroy*—type); Chapra (*Mackenzie*—Pusa Coll.). UNITED PROVINCES: defoliating cherry, Chandbagh, Dehra Dun (*C. F. C. Beeson*).

Type in the British Museum.

321. **Myllocerus nodicollis**, sp. nov.

Colour black with mingled blue and green scales.

Head with the eyes lateral and moderately convex, the forehead flattened and striolate, its breadth much greater than the length of the eye or the space between the scrobes. *Rostrum* of ♀ broader than long, narrowed from the base to beyond the middle, the genæ strongly dilated, the apical emargination rather shallow but forming an acute angle, the discal area shallowly impressed and tricarinate, the outer carinæ slightly diverging behind, a distinct transverse carina near the apex; the ♂ rostrum differs, being about as long as broad, and the longitudinal carinæ are much less distinct. *Antennæ* ferruginous; the scape gently curved, gradually clavate, with recumbent setæ and elongate pale scales; the funicle with joint 2 much longer than 1, and 3 and 4 subequal, the rest longer than broad. *Prothorax* transverse, the sides moderately rounded and broadest at the middle in the ♀, less rounded and broadest behind the middle in the ♂, the base shallowly bisinuate, the apical margin a little narrower, feebly sinuate dorsally in the middle and vertical at the sides; the upper surface somewhat flattened in the posterior half and with a very shallow rounded impression on each side, in the middle of the base a bare longitudinal tubercle, which is conspicuous in the ♀ but rudimentary in the ♂, the coarse punctation mostly hidden by the scaling. *Elytra* narrow and parallel-sided in the ♂, broader and dilated behind the middle in the ♀, the base deeply sinuate in the middle, the shoulders roundly rectangular, the striæ rather broad and shallowly punctate, the intervals slightly convex, with moderately dense scaling and very short recumbent setæ. *Legs* piceous to ferruginous, with fairly dense scaling, the femora with a sharp tooth, the tibiæ not sinuate internally.

Length, 3½–5 mm.; breadth, 1¼–2 mm.

ASSAM: Shillong (*F. W. Champion*).

Types ♂ ♀ in the British Museum.

322. **Myllocerus severini**, sp. nov.

Colour black, with greyish-green scaling; the prothorax with a central dark stripe and usually with a narrower interrupted stripe on each side of it; the elytra mottled with irregular and variable small black markings on the disk.

Head with the eyes subdorsal and only slightly convex, the forehead not broader than the space between the scrobes. *Rostrum* about as long as broad, longer than the head, the sides narrowed from the base to beyond the middle and dilated at the apex, the apical emargination very shallow, the base of the epistome being broadly rounded; the upper surface plane, with a very fine central carina, the lateral carinæ indistinct. *Antennæ* piceous; the funicle with joint 2 slightly longer than 1, 3 and 4 equal. *Prothorax* broader than long, the sides subparallel from the apex to the middle and then narrowing to the base, the apical margin vertically truncate at the sides, the base distinctly bisinuate; the upper surface with confluent punctation hidden by the scaling, transversely impressed near the apex and with a shallow rounded impression on each side behind the middle. *Elytra* separately rounded at the base, the shoulders subrectangular, the sides parallel to beyond the middle in the ♂, slightly dilated behind in the ♀, finely punctato-striate and with rather long erect pale setæ. *Legs* piceous or ferruginous, with dense greyish scaling, the femora with a single short tooth.

Length, 3¼–4½ mm.; breadth, 1½–2 mm.

BENGAL: Chota Nagpur (*Cardon*).

Type in the British Museum.

323. **Myllocerus impallescens**, sp. nov.

Colour black, with uniform very pale green or whitish-green scaling.

Head with the eyes rather small, lateral and prominent, the forehead very broad. *Rostrum* as long as broad, longer than the head, gradually narrowing from the base anteriorly and slightly dilated at the apex, the emargination very deep and acute; the upper surface almost plane, without distinct carinæ, but with a fine bare central line. *Antennæ* as in *M. subglaucus*, but with the setæ suberect on the scape and the club shorter. *Prothorax* scarcely broader than long, the sides slightly rounded, faintly constricted in front and behind, the base shallowly bisinuate, the apical margin of equal width and oblique laterally, the punctation faintly visible through the scaling. *Elytra* as in *M. subglaucus*, but with very dense short subdepressed setæ; the scutellum covered with scales. *Legs* reddish brown, with dense greenish scaling, the femora with a sharp tooth.

Length, 5–5⅝ mm.; breadth, 2¼–2½ mm.

MADRAS: Nilgiri Hills (*H. L. Andrewes*).

Type in the British Museum.

324. **Myllocerus improvidus**, sp. nov.

Colour black, with thin grey scaling (specimens abraded?).

Head with the eyes sublateral and slightly prominent, the forehead broader than the space between the scrobes. *Rostrum* about as long as broad, its sides subparallel at the base and very slightly dilated at the apex, the apical emargination deep and acute; the upper surface impressed and with a faint central carina, the lateral carinæ distinct. *Antennæ* piceous, the scape with depressed setæ; the funicle with joint 2 much longer than 1, 3 and 4 equal. *Prothorax* transverse, the sides rounded, broadest at the middle, constricted before and behind, the posterior angles rather acute, the base shallowly bisinuate, the apical margin of equal width and almost vertical laterally; the upper surface with confluent punctation which is scarcely visible through the scaling. *Elytra* as in *M. impallescens*. *Legs* blackish, with thin pale scaling; the tibiæ sinuate internally at the base and the two anterior pairs with a slight prominence near the middle, the femora with a single sharp tooth.

Length, 5¼–5½ mm.; breadth, 2½ mm.

MADRAS: Anamalai Hills (*H. L. Andrewes*).

Type in the British Museum.

325. **Myllocerus curvicornis**, *F.*

Curculio curvicornis, Fabricius,* Ent. Syst. i, pt. 2, 1792, p. 488.
Myllocerus transmarinus, Boheman * (nec Herbst), Schönh. Gen. Curc. ii, 1834, p. 429; Heller, Deut. Ent. Zeit. 1901, p. 338.

Colour black or piceous, with grey and brown scaling; the prothorax dorsally either dark brown with a narrow central pale brown line, or paler brown with a dark brown stripe on each side; the elytra dark or pale brown above, more or less closely mottled with small grey spots, sometimes partly confluent; sides of head, prothorax and elytra, and the under-parts grey or whitish, the margin of the elytra usually with some brown spots.

Head with sparse obscure punctation hidden by the scaling, the eyes lateral, the forehead broader than the space between the scrobes. *Rostrum* rather longer than the head, slightly dilated at the apex, shallowly impressed above and with a distinct bare central carina, which ascends the forehead, the lateral carinæ also distinct. *Antennæ* piceous, with depressed grey setæ; the funicle with joint 2 evidently longer than 1, 3 slightly longer than 4. *Prothorax* transverse, the sides slightly rounded, broadest about the middle, very shallowly constricted near the base and the apex, the basal margin moderately bisinuate, not broader than the apex, the external angles acute, the deep close punctation hidden by the scaling. *Elytra* rather broad, separately rounded at the base, deeply punctato-striate, the punctures easily visible through the scaling, the setæ very short and recumbent. *Legs* piceous, with grey scaling, all the femora with a single tooth, the tibiæ simple.

Length, 5–7½ mm.; breadth, 2–3½ mm.

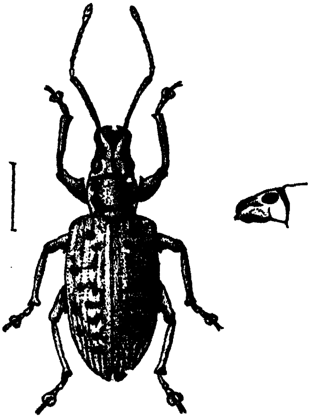

Fig. 104.—*Myllocerus curvicornis*, F.

Madras: Pondicherry (*Perrotet, Maindron*); Tranquebar (*G. R. Dutt*—Pusa Coll.). Ceylon: Kandy and Colombo (*Bryant, G. Lewis*); Batticaloa, Odduchuddan and Trincomali (*C. F. Baker*); Kitulgalle (*G. Lewis*); Haragama (*E. E. Green*); Habarana, Kekirawa, Nalanda, Negombo, Puttalam and Neligama (*Dr. W. Horn*).

Type in the Copenhagen University Museum.

Mr. E. E. Green gives the following notes on this species:—"Destructive to foliage of young cacao plants; feeding on young leaves of tea plant; injuring rose leaves."

326. **Myllocerus roscidus**, sp. nov.

Colour black, with moderately dense grey scaling, through which the sheen of the integument can be seen; the prothorax with a dark lateral stripe on each side, and the elytra usually mottled on the disk with dark markings, but occasionally of a uniform grey colour.

Head with the eyes lateral and strongly convex, the forehead much broader than the eye. *Rostrum* scarcely as long as the head, much broader than long, very slightly narrowed from the base to the middle and scarcely dilated at the apex; the upper surface broadly impressed and with a faint central carina, which ascends the forehead, the apical emargination deep and forming an acute angle. *Antennæ* piceous, with recumbent white setæ; the scape moderately stout and gradually widened to the apex; the funicle with joint 2 longer than 1, and 3 evidently longer than 4. *Prothorax* markedly transverse, the sides scarcely rounded in the middle, with a very shallow constriction near the apex and a very deep one near the base, the basal margin shallowly bisinuate and with the external angles subacute, the apical margin not narrower than the basal and slightly oblique at the sides; the upper surface with a broad and deep transverse impression at the base, the anterior portion slightly flattened in the middle, the large punctures scarcely visible through the scaling. *Elytra* separately rounded at the base, the shoulders roundly subrectangular, the sides subparallel in the ♂, a little dilated behind the middle in the ♀, the close punctation of the striæ readily visible through the scaling, the intervals impunctate and slightly convex, the setæ very short and recumbent. *Legs* piceous, with the tibiæ and tarsi usually paler; the femora with a single sharp tooth, the tibiæ sinuate internally at the base.

Length, 4–5¼ mm.; breadth, 1½–2 mm.

MADRAS: Nilgiri Hills (*H. L. Andrewes*).

Type ♀ in the British Museum.

This species is like a small *M. curvicornis*, F., but in addition to the characters given in the key, it differs in its more convex eyes, more slender and more curved scape, and the much deeper basal constriction of the prothorax.

327. Myllocerus subfasciatus, *Guér.*

Myllocerus subfasciatus, Guérin,* Voy. Deless. ii, 1843, p. 54; Boheman, Schönh. Gen. Curc. vii, pt. 1, 1843, p. 10.
Myllocerus spurcatus, Walker,* Ann. Mag. Nat. Hist. (3) iii, 1859, p. 263.
Myllocerus nubilosus, Faust,* Deut. Ent. Zeit. 1897, p. 358.
Myllocerus mutabilis, Faust,* l. c. p. 359.

Colour black, with rather harsh brown scaling; the prothorax usually paler at the sides and with a paler central line; the elytra more or less irrorated with grey or whitish scaling, usually forming faint transverse bands, but sometimes these pale bands are much more conspicuous.

Head with a central fovea (usually concealed by the scaling), the eyes lateral, narrower than the forehead, which is slightly broader than the space between the scrobes. *Rostrum* a little longer than the head, slightly dilated at the apex, rather deeply impressed above and with a narrow smooth central line which ascends the forehead. *Antennæ* stout, the scape with dense suberect setæ; the funicle with joint 2 longer than 1, 3 and 4 equal, 2 to 6 with conspicuous white setæ. *Prothorax* transverse, the sides slightly (type form) or more strongly rounded, deeply constricted and transversely impressed near the base, more shallowly constricted near the apex, with deep close punctation (visible through the scaling) and a shallow rounded lateral impression behind the middle. *Elytra* comparatively broad, the shoulders roundly rectangular, the striæ broad and deeply punctate, with dense short subdepressed and squamiform setæ. *Legs* piceous, with dense grey or brown scaling; all the femora with two unequal teeth; the tibiæ with an internal basal emargination followed by a slight angular projection, these being less marked in the ♀.

Length, $3\frac{3}{4}$–$5\frac{3}{4}$ mm.; breadth, $1\frac{5}{8}$–$2\frac{3}{4}$ mm.

Madras: Anamalai Hills, 3500–4000 ft. (*H. L. Andrewes*); Ouchterlony Valley, Droog and Naduvatam, Nilgiri Hills, 3000–6000 ft. (*H. L. Andrewes*); Hulikal, Nilgiris, 6000 ft. (*Capt. A. K. W. Downing*); on potato leaves, Utakamand, 7000 ft. (Pusa Coll.); Coonoor, 6000 ft. (*Capt. Sewell*—Ind. Mus.); Mahé, Malabar (*Maindron*); Pondicherry (*Perrotet*). Bombay: N. Kanara (*T. R. D. Bell*); Belgaum (*H. E. Andrewes*, *N. B. Kinnear*). Central Provinces: Chikalda, 3660 ft., Berars (*Kinnear*).

Type in the Stockholm Museum.

M. subfasciatus var. **mutabilis**, *Fst.*

This varietal name may be applied to those examples in which the white markings are specially well developed and form conspicuous transverse bands.

Bombay: Ghozeh and Belgaum (*H. E. Andrewes*); Bagawadi, Belgaum (*H. V. Kemball*); N. Kanara (*Bell*). Madras: Nilgiri Hills (*H. L. Andrewes*): Burma: Taung-ngu (*Corbett*).

Type in the Dresden Museum.

M. subfasciatus var. **spurcatus**, *Walker.*

This variety is distinguished by its more strongly rounded prothorax and the slightly greater dilatation of the rostrum; the paler scaling is never conspicuous as in *mutabilis*.

All the Ceylon examples I have seen belong to this form; but it occurs also on the mainland, where it merges so gradually into the typical form that I cannot regard it as specifically distinct. Faust's *M. nubilosus* is synonymous with this.

Bombay: Sampgaon and Belgaum (*H. E. Andrewes*). Madras: Anamalai Hills (*H. L. Andrewes*). Ceylon: Dikoya, Bogawantalawa and Balangoda (*G. Lewis*); Anuradhapura, Haputala and Nalanda (*Dr. W. Horn*).

Type in the British Museum.

328. **Myllocerus andrewesi**, sp. nov.

Colour black, with bright fawn-coloured scaling and with the following large well-defined pale green patches having a slight metallic reflexion:—the prothorax with a broad pale lateral stripe; the elytra with a transverse patch before the middle on intervals 2 to 5, a much larger oblique lateral kidney-shaped patch extending from interval 5 to 10, often uniting at its posterior inner edge with a rounded patch behind the middle on 2 to 5, and finally a broad lunate patch close to the apex.

In its structural characters this species agrees entirely with the typical form of *M. subfasciatus*, Guér., except in the larger size of its eyes which are not narrower than the forehead, in the absence of the rounded lateral impressions on the prothorax, and in the greater development of the internal angulation of the tibiæ.

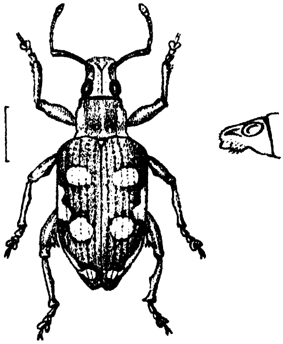

Fig. 105.—*Myllocerus andrewesi*, Mshl.

Length, 4½–6¾ mm.; breadth, 2–2½ mm.

Madras: Nilgiris, 2500 ft., and Anamalais, 3500–4000 ft. (*H. L. Andrewes*).

Type in the British Museum.

329. Myllocerus dentifer, *F.*

Curculio dentifer, Fabricius,* Ent. Syst. i. pt. 2, 1792, p. 488; Boheman, Schönh. Gen. Curc. ii, 1834, p. 430.

Colour black, with greyish-brown or pale fawn scaling, sometimes mottled with small darker spots along the striæ.

Head with indistinct shallow punctation beneath the scaling, the eyes widely separated, the space between them greater than that between the scrobes. *Rostrum* a little longer than the head, the sides very slightly narrowed from base to apex, almost plane above, with a shallow central impression containing a fine carina and ascending the forehead. *Antennæ* with the scape only slightly exceeding the anterior margin of the prothorax, the funicle with the two basal joints subequal, 3 scarcely longer than 4. *Prothorax* transverse, the sides subparallel or slightly rounded in the anterior half, then strongly constricted towards the base, the posterior angles acute, the basal margin moderately bisinuate and not broader then the apex; the upper surface with large shallow punctures hidden by the scaling and with a shallow transverse impression before the base. *Elytra* of the normal shape, the striæ (as seen through the scaling) narrow and finely punctate, the intervals almost plane and with very short dense subdepressed setæ. *Legs* piceous; the anterior pairs of femora with two teeth, the hind pair with a large tridentate tooth; the tibiæ deeply emarginate internally at the base, especially the hind pair.

Length, 4–6½ mm.; breadth, 1⅞–2½ mm.

CEYLON: Galle (*G. Lewis*); Colombo (*Dr. W. Horn*). MADRAS: Mahé and Genji (*Maindron*); Madura (*C. Somers Smith*); Tranquebar; Vizagapatam; on paddy, Shoranur, Malabar; on ground nuts, Palur, S. Arcot (Pusa Coll.); Lake Chilka, Ganjam dist. (Ind. Mus.). BENGAL: Balighai, Orissa (*Annandale*); Angul, Orissa (*J. Taylor*—Ind. Mus.); Balugaon, Puri dist. (*Annandale*); Palamow (Pusa Coll.); Chota Nagpur (*Cardon*).

Type in the Copenhagen University Museum.

330. **Myllocerus discolor**, *Boh.*

Myllocerus discolor, Boheman,* Schönh. Gen. Curc. ii, 1834, p. 428.
Myllocerus variegatus, Boheman,* op. cit. vii, 1843, p. 9.
Myllocerus discolor var. *variegatus*, Stebbing, Indian Forest Insects, 1914, p. 403.

Colour black, with dull fawn-coloured scaling and paler markings; the head with a pale ring round the eye and a pale vertical spot; the prothorax with a central pale grey stripe and a short basal stripe on each side of it; the elytra densely variegated

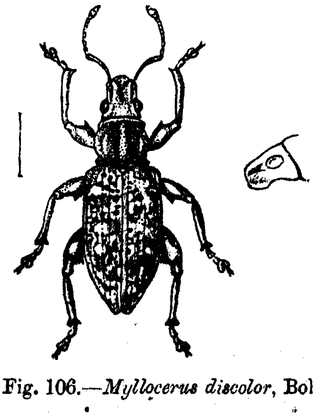

Fig. 106.—*Myllocerus discolor*, Boh.

with irregular pale grey spots and sometimes with darker markings, the extreme lateral margins almost entirely grey; under-parts brownish-grey.

Extremely close to *M. dentifer*, F., in structure, and the description of that species applies to it except in the following particulars:—

Rostrum very slightly widened at the apex. *Prothorax* less transverse, almost as long as broad, owing to the greater production of the median basal lobe, which makes the base much more deeply bisinuate. *Elytra* with the striæ broader and the punctation coarser, the setæ a good deal longer and more conspicuous on the disk.

Length, 5½–7 mm.; breadth, 2¼–3 mm.

PUNJAB: Rampur, Sutlej Valley; Patiala (Pusa Coll.). UNITED PROVINCES: Almora, 5000 ft., and Takula, Kumaon; Dehra Dun; Allahabad (*S. W. Kemp*—Ind. Mus.). BENGAL; Calcutta and Champaran (Ind. Mus.); Pusa, Jamalpur, Dacca and Kanti (Pusa Coll.); Katihar and Bhogaon, Purneah dist. (*C. A. Paiva*—Ind. Mus.); Sarda (*F. W. Champion*); Angul, Orissa (*J. Taylor*—Ind. Mus.); Bhubaneshwar, Puri dist. (*F. H. Gravely*); Berhampur, Murshidabad dist. (*E. T. Atkinson*); Chilka, Ganjam dist. (Ind. Mus.); Hazrapur (*Wood-Mason*).

Type in the Stockholm Museum.

Further south the species is represented by the following varietal form:—

M. discolor var. **variegatus**, *Boh.*

This differs from the typical form in the absence of the two short basal grey stripes on the prothorax; the under-parts are nearly always paler, being sometimes almost white; the grey markings on the elytra are also paler and usually consist of large irregular blotches mingled with small spots.

Boheman's statement, that the second joint of the funicle is half as long again as the first, is clearly an error, due to the fact that in some positions the base of the first joint is partly hidden by the apex of the scape.

BOMBAY: Sampgaon and Ghozeh, Belgaum (*H. E. Andrewes*). MADRAS: Ganjam (Ind. Mus.); Nilgiris (*H. L. Andrewes*); Mount Stuart, S. Coimbatore (*E. P. Stebbing*); Madura (*C. Somers Smith*); Genji (*Maindron*). CEYLON: Eppewala (*E. E. Green*); Nalanda (*Dr. W. Horn*). BURMA: Taung-ngu (*G. Q. Corbett*).

Type in the Stockholm Museum.

To the northward again another colour variation occurs, viz.:—

M. discolor var. **uniformis**, nov.

In this form the pale markings of the elytra have entirely disappeared and the colour is an almost uniform dull greyish-brown, so that it much resembles darker specimens of *M. dentifer*, F. On the head and prothorax there still remain traces of the typical fawn-colour, but the pale central stripe on the latter part is reduced to a mere trace.

Mr. E. P. Stebbing states that this form causes serious damage to leaves on the tree *Dalbergia sissoo*.

UNITED PROVINCES: Mundali, Jaunsar (*E. P. Stebbing*).

Type in the British Museum.

M. discolor var. **canescens**, nov.

This Ceylonese form is characterised by the great development of greyish-white scaling, so that the elytra are entirely of this colour, except for a faint narrow stripe of pale fawn running from the shoulder to near the apex; the head and a broad stripe on each side of the prothorax are also fawn-colour.

CEYLON: Halupahani (type); Batticaloa (*C. F. Baker*).

Type in the British Museum.

The larva of the typical form of *M. discolor* is stated by Mr. Lefroy to feed on the roots of the sugar-cane, being a serious pest in some districts; while the beetle itself has been observed to feed on the young leaves of the mango, on loquat, guava, teak, *Dalbergia sissoo*, *D. paniculata*, *Zizyphus jujuba*, *Eriobotrys japonica*, *Acacia intsia*, cotton and lucerne.

331. **Myllocerus undatus**, sp. nov.

Colour black, with white or pale grey scaling; the prothorax with three darker subdenuded stripes, the outer ones being interrupted; the elytra with more or less distinct large dark brown blotches, which generally form three irregular oblique bands.

Very closely allied to *M. 11-pustulatus*, Fst., and only to be distinguished with certainty from some variations of that species by its narrow forehead, which is not broader than the length of the eye.

Length, 5–6½ mm.; breadth, 2¼–3 mm.

CEYLON: Weligama (*Dr. W. Horn*); Kandy (*G. E. Bryant*, *E. E. Green*).

Type in the British Museum.

332. **Myllocerus 11-pustulatus**, *Fst.*

Myllocerus 11-pustulatus, Faust,* Stett. Ent. Zeit. 1891, p. 266.
M. 11-pustulatus var. *pistor*, Faust,* Deut. Ent. Zeit. 1897, p. 361.
Myllocerus marmoratus, Faust,* Deut. Ent. Zeit. 1897, p. 360 (n. syn.).

Myllocerus maculosus, Desbrochers des Loges,* Ind. Mus. Notes, iv, 1899, p. 111 (n. syn.); Stebbing, Indian Forest Insects, 1914, p. 402.

Colour (type form) black, with pale grey scaling, the head sometimes tinged with fulvous; each elytron with the following rounded black spots: one on the shoulder, one each on intervals 4 and 9 just before the middle, one on 8 just behind the middle, one still further back on interval 3, and one at the apex of 5; these spots very variable in size and one or more frequently absent.

So far as structural characters are concerned the description of *M. dentifer*, F., applies entirely to this species, except that the rostrum is in this case parallel-sided, or even a little dilated at the apex; the antennæ are more slender, the second joint of the funicle being evidently longer than the first; and the elytra are proportionately more elongate.

Length, 3¾–6 mm.; breadth, 1½–2½ mm.

BENGAL: Chota Nagpur (*Cardon*); Monghyr (*J. T. Jenkins*—Ind. Mus.). BOMBAY: Ghozeh and Bagewadi, Belgaum (*H. E. Andrewes*); N. Kanara (*T. R. D. Bell*); Bassein Fort (Pusa Coll.); on maize, Surat (Pusa Coll.); on millet, Poona.

Type in the Dresden Museum.

M. 11-pustulatus var. **pistor,** *Fst.*

Characterised by the complete absence of the black spots, the colour being uniform pale grey.

This variation occurs in company with the type form, but I have also seen a single specimen from the Nilgiri Hills (*H. L. Andrewes*).

Type in the Dresden Museum.

M. 11-pustulatus var. maculosus, *Desbr.*

The typical specimens are of a pale green colour, with irregular and very variable dark brown patches on the elytra. The green ground-colour appears to be specially characteristic of the more northern examples, those from Bengal and the south being grey.

In spite of the marked difference in colouring, I have failed to find any reliable structural characters by which this form can be separated from *M. 11-pustulatus*, Fst. Moreover, in the very long series of the latter which I have seen in the collections of M. Bovie and the Brussels Museum from Chota Nagpur, there are a few specimens which show a slight intermediate tendency in the direction of *M. maculosus*.

PUNJAB: Hafizabad; Lyallpur; Chiniot and Lahore (*H. M. Lefroy*—Pusa Coll.); Sutlej Valley, Kulu and Bashahr States, 2300–3500 ft. (*E. P. Stebbing*). UNITED PROVINCES: Allahabad (*A. D. Imms*); Cawnpore (Pusa Coll.). BENGAL: Katihar, Purneah dist. (*C. A. Paiva*—Ind. Mus.); Pusa (*H. M. Lefroy*); Chapra (*Mackenzie*—Pusa Coll.); Dacca and Mazaffarpur (Pusa Coll.);

Cuttack, Orissa. MADRAS: Bangalore, 3000 ft. (*Annandale*—Ind. Mus.).

Type in the Indian Museum.

Mr. Stebbing records this form as defoliating sissu trees (*Dalbergia sissoo*). At Pusa it has been found on strawberry, lucerne, cotton, tur, sunflower, sugar-cane, pomegranate, *Zizyphus jujuba* and mango.

M. 11-pustulatus var. **marmoratus**, *Fst.*

Ground-colour dirty chalk-white, sometimes with a pinkish tinge; the head pale ochreous: the elytra with comparatively faint grey mottling, forming transverse or oblique bands.

I have seen only three specimens, which I cannot distinguish structurally from 11-*pustulatus*.

BOMBAY: Ghozeh, Belgaum (*H. E. Andrewes*); N. Kanara (*T. R. D. Bell*).

Type in the Dresden Museum.

I have also seen six specimens in the Paris Museum from Mahé (*M. Maindron*) which to some extent combine the characters of the two preceding varieties. The general colour is chalky-white or grey; the dark markings on the elytra are distinct and form a sort of broken stripe along each side of the suture, and do not extend laterally to the margins as in *marmoratus*; the prothorax has three broad subdenuded dark stripes. They are above the average in size, the largest measuring $7\frac{1}{2} \times 3\frac{1}{8}$ mm.

Genus **HYPERSTYLUS**.

Hyperstylus, Roeloffs, Ann. Soc. Ent. Belg. xvi, 1873, p. 171.

TYPE, *Hyperstylus pallipes*, Roel. (Japan).

Head exserted, the eyes lateral. *Rostrum* continuous with the head; the scrobes dorsal, foveiform and close to the apex: mandibles and mentum as in *Myllocerus*. *Antennæ* with the scape strongly curved and gradually clavate; the funicle with joint 1 evidently longer than 2, 2 longer than 3, 3–7 subequal, club narrowly ovate and acuminate. *Rostrum* truncate at base and apex, the apical margin oblique at the sides, the gular margin not sinuate. *Elytra* subtruncate at the base, the shoulders prominent and roundly rectangular, the sides parallel, or slightly dilated behind the middle in the ♀, with 10 fine punctate striæ, the intervals plane and smooth. *Sternum* and *venter* as in *Myllocerus*. *Legs* with the femora unarmed, otherwise as in *Myllocerus*.

Range. India and Japan.

These insects can be distinguished only by their unarmed femora from those small species of *Myllocerus* which have the base of the prothorax truncate and the first joint of the funicle longer than the second. I can find no good reason for separating them generically from Roeloffs' Japanese species.

Key to the Species.

1 (4) Rostrum much shorter than the head and gradually dilated from base to apex.	
2 (3) Rostrum only slightly broader than long; club of antennæ darker than the rest; elytra with stiff erect curved setæ; scaling uniformly pale green ..	*chloris*, sp. n., p. 353.
3 (2) Rostrum nearly twice as broad as long; club of antennæ not darker; elytra with recumbent setæ; scaling uniformly grey	*cinereus*, sp. n., p. 353.
4 (1) Rostrum as long as the head, narrowed from the base to about the middle and slightly dilated thence to the apex.	
5 (6) Elytra with recumbent setæ	*plebeius*, sp. n., p. 354.
6 (5) Elytra with erect curved setæ	*hispidulus*, sp. n., p. 354.

333. **Hyperstylus chloris**, sp. n.

Colour ferruginous, with uniform dense pale green scaling above and below.

Head as long as broad, the eyes only slightly convex. *Rostrum* shorter than the head, slightly broader than long, gradually dilated from the base to the apex, the space between the scrobe and the eye very small; the upper surface plane and with a fine central stria. *Antennæ* flavous, with the club darker. *Prothorax* broader than long, the sides slightly rounded, broadest a little behind the middle, the apex not narrower than the base, the sculpturing hidden by the dense scaling. *Scutellum* unicolorous with the elytra. *Elytra* rather broad, slightly convex longitudinally, and with short erect pale setæ. *Legs* uniformly flavous, the femora not darker.

Length, 2–$2\frac{5}{8}$ mm.; breadth, $\frac{3}{4}$–$1\frac{1}{8}$ mm.

PUNJAB: Kangra Valley, 4500 ft. (*G. C. Dudgeon*).

Type in the British Museum.

Very similar in size, shape and colour to the type species, *H. pallipes*, Roel., from Japan; but that species has the rostrum not broader than the forehead, the scrobes much more closely approximated, the eyes prominent and the elytra without erect setæ.

334. **Hyperstylus cinereus**, sp. nov.

Colour black, with uniform dense grey scaling above and below. Closely allied to *H. chloris*, but differing as follows:—

Head broader than long, the eyes more convex. *Rostrum* much shorter, nearly twice as broad as long. *Antennæ* uniformly flavous. *Elytra* with recumbent setæ. *Legs* flavous, with the thickened part of the femora darker.

Length, 2–$2\frac{1}{2}$ mm.; breadth, $\frac{3}{4}$–$1\frac{1}{8}$ mm.

ASSAM: Khasi Hills.

Type in the British Museum.

335. **Hyperstylus plebeius**, sp. nov.

Colour piceous, with dense brown scaling more or less variegated with grey.

Head broader than long, the eyes strongly convex. *Rostrum* about as long as broad, narrowed from the base to the middle and slightly dilated again to the apex, the space between the eye and the scrobe almost equal to the width of the eye; the upper surface with a fine central stria. *Antennæ* thick, uniformly ferruginous. *Prothorax* broader than long, the sides rounded, broadest at the middle, the apex not narrower than the base, the punctation faintly visible through the scaling. *Scutellum* paler than the elytra. *Elytra* rather elongate, flattened longitudinally, with depressed setæ. *Legs* flavous or ferruginous, with the femora sometimes darker.

Length, 2¼-3 mm.; breadth, ¾-1¼ mm.

MADRAS: Naduvatam, 6000 ft., Nilgiri Hills (*H. L. Andrewes*).

Type in the British Museum.

336. **Hyperstylus hispidulus**, sp. nov.

Colour black, with dense brown scaling turning greyer at the sides and beneath.

Very close to *H. plebeius*, but differing in the following characters:—

Head with the eyes much less convex. *Prothorax* narrower at the apex than at the base and broadest a little behind the middle. *Elytra* with short, curved, erect setæ.

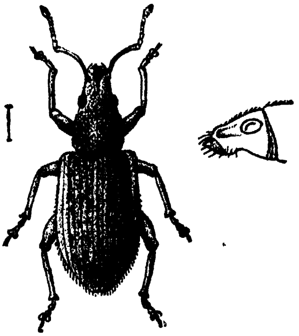

Fig. 107.—*Hyperstylus hispidulus*, Mshl.

Length, 3¼-3½ mm.; breadth, 1¼-1½ mm.

MADRAS: Nilgiri Hills (*Sir G. Hampson*, *H. L. Andrewes*).

Type in the British Museum.

Genus ARRHINES, *Schönh.*

Arhines, Schönherr, Gen. Curc. ii, 1834, p. 465; Lacordaire, Gen. Col. vi, 1863, p. 214.

TYPE, *Arrhines languidus*, Gyl.

Head exserted; the eyes large, sublateral, oval and very convex. *Rostrum* deflected, about as long as the head and continuous with it, narrowed from the base to the middle, the base much broader than the forehead, the apical emargination broad, the epistome not carinate, the upper surface plane; the scrobes apical, sublateral, short and narrow; mandibles as in *Myllocerus*, but with the scar rather more prominent; mentum with 6 or 8 setæ. *Antennæ* subapical; the scape slender, almost straight, clavate and reaching the anterior margin of the thorax; the funicle with the two basal joints elongate, 1 evidently longer than 2, 3–7 subequal; the club elongate, 4-jointed, joint 1 scarcely longer than 2. *Prothorax* slightly transverse, rounded at the sides, truncate at the base and apex, the latter being narrower, the gular margin scarcely sinuate. *Scutellum* distinct, longitudinal. *Elytra* subtruncate at the base, much broader than the thorax at the shoulders, which are roundly rectangular, more or less compressed behind, so that the sutural margin forms a ridge on the declivity, with 10 striæ, the lateral margins distinctly sinuate above the hind coxæ. *Sternum* with the very large anterior coxæ almost touching the front margin of the prosternum; meso- and metasternum and the abdomen as in *Myllocerus*. *Legs* slender, the femora strongly clavate and with or without any tooth, the tibiæ almost straight and simple, the hind corbels open and terminal; the tarsi slender, joint 1 the longest, 2 narrow, 3 broadly lobate, 4 elongate, the claws long and free.

Range. India, Burma and southwards to Java.

In all the species that I have seen the scales on the sternum and venter are all delicately feathered.

Key to the Species.

1 (4) Femora without a distinct tooth.
2 (3) Scape almost straight and gradually thickened; joint 1 of funicle evidently longer than 2; upper surface with fine pubescence and without any scaling .. *languidus*, Gyl., p. 356.
3 (2) Scape strongly curved in the middle and abruptly clavate; the two basal joints of the funicle subequal; upper surface with dense dark green scaling and pinkish markings .... *vitticollis*, sp. n., p. 357.
4 (1) Femora with a distinct tooth.
5 (8) Elytra with single rows of rather stout long dark setæ; prothorax with short straight erect setæ.

6 (7) Funicle with joint 1 evidently longer than 2; elytra with the longitudinal outline flat dorsally and abruptly declivous behind, with a distinct emargination just above the apical process .... *hirtus*, Fst., p. 357.
7 (6) Funicle with joint 1 not or only slightly longer than 2; elytra with the dorsal outline slightly convex and continuous, without any pre-apical emargination .. *tutus*, Fst., p. 358.
8 (5) Elytra with doubled rows of much denser and finer, soft, pale hairs; prothorax with short curved or subrecumbent setæ.............................. *lanugineus*, Fst., p. 359.

337. Arrhines languidus, *Gyl.*

Arhines languidus, Gyllenhal,* Schönh. Gen. Curc. ii, 1834, p. 466.
Arhines brunneus, Faust,* Stett. Ent. Zeit. 1886, p. 142.

Colour black or brown, the elytra without scaling, but with rather long, dense, suberect, soft pale pubescence, which is a little longer and more erect at the base.

Head with close shallow punctation, the forehead with a rounded central impression. *Rostrum* only slightly dilated at the apex, with short suberect pubescence, closely and confluently punctate above, and with a more or less distinct central carina. *Antennæ* with the scape very slightly curved and gradually thickened towards the apex, the funicle with joint 1 much longer than 2. *Prothorax* rather broader than long, a little shorter than the head and rostrum together, with the sides rather strongly rounded, broadest at the middle; the upper surface with coarse confluent punctation and short erect pubescence. *Elytra* oblong-ovate, parallel-sided from the shoulders to beyond the middle, the dorsal outline almost flat and steeply declivous behind, the apices each with a small process, deeply punctato-striate, the intervals rather broad and smooth, the pubescence not concealing the sheen of the elytra. *Legs* piceous brown, with pale pubescence; the femora unarmed, but sometimes with a faint trace of a tooth.

Length, 5½–6¾ mm.; breadth, 2⅜–3 mm.

UNITED PROVINCES: Dehra Dun; Delhi (Ind. Mus.). BENGAL: Pusa (*H. M. Lefroy*—Pusa Coll.); Ranchi, Chota Nagpur (*W. H. Irvine*—Ind. Mus.); Calcutta (*E. T. Atkinson*); Pertapganj; Sarda (*F. W. Champion*). KASHMIR: Jhilam Valley (*Dr. Stoliczka*—Ind. Mus.).

Type in the Stockholm Museum; that of *A. brunneus* at Dresden.

The only character which Faust mentions as differentiating his *A. brunneus* from *A. languidus*, Gyl., is the greater length of the hairs on the posterior two-thirds of the elytra. This feature is fairly well marked in the type in Faust's collection, and also in another of Stoliczka's specimens in the British Museum. But a co-type in the Indian Museum (also taken by Stoliczka) is intermediate between these and *languidus*; while Bengal examples of the latter show such variations in the elevation and length of these hairs as to render it improbable that this character has a specific value.

338. **Arrhines vitticollis**, sp. nov.

Colour piceous, with dense dark green scaling hiding the integuments; the rostrum with a narrow, the head with a broad, pinkish central stripe, the scutellum whitish, the sides of the elytra with variable pinkish spots, the apex of the rostrum metallic green.

Head without any central fovea, the sculpture hidden by the scaling. *Rostrum* scarcely dilated at the apex, with short erect setæ which are longer than those on the thorax or elytra; the upper surface declivous in front and with a short central carina in the basal half. *Antennæ* testaceous, the club fuscous; the scape slender, strongly curved in the middle and abruptly clavate at the apex, the two basal joints of the funicle subequal. *Prothorax* a little longer than broad and longer than the head and rostrum together, the sides slightly rounded, broadest a little before the middle; the upper surface with the rugose punctation partly concealed by the scaling, with a faint central carina and very short erect setæ. *Elytra* oblong-ovate, parallel-sided from the shoulders to beyond the middle, the dorsal outline slightly curved, the posterior declivity gradual, the apices separately rounded and without any process, deeply punctato-striate, the intervals rather narrow and smooth, with very short dense suberect setæ. *Legs* piceous brown, with brown scaling and pinkish markings, the femora unarmed.

Length, 5¼ mm.; breadth, 2 mm.

BURMA: Rangoon (*Fea*).

Type in the Genoa Museum.

339. **Arrhines hirtus**, *Fst.*

Arhines hirtus, Faust,* Ann. Soc. Ent. France, 1893, p. 506.

Colour dark brown, with narrow, elongate, green blue or coppery scales, which are more or less dense along the sides of the head, thorax and elytra, and broken up into spots and patches on the dorsal part of the elytra.

Head with confluent punctation, the forehead with a central furrow. *Rostrum* scarcely dilated at the apex, confluently punctate above, with a distinct central carina and short erect setæ. *Antennæ* piceous, with the scape moderately slender and gradually clavate at the apex, the funicle with joint 1 much longer than 2. *Prothorax* rather broader than long, as long as the head and rostrum together, the sides strongly rounded, broadest about the middle, with deep separated punctures above and with short erect setæ, the spaces between the punctures finely aciculate and less shiny. *Elytra* elongate, subparallel from the shoulders to the middle, then gradually narrowed, the dorsal outline almost plane and abruptly declivous behind, the apices each with a short rounded process and a distinct emargination above it, the intervals slightly convex and smooth, with single rows of long stiff erect dark setæ.

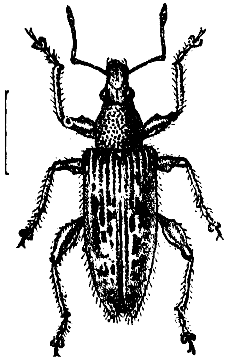

Fig. 108.—*Arrhines hirtus*, Fst.

Legs reddish brown, with sparse scaling and dense pale setæ, the femora with a distinct tooth.

Length, 6½–8 mm.; breadth, 2⅜–3⅛ mm.

BURMA: Shan States (*Col. N. Manders*); Chigyam (*Fea*); Maymyo (*H. L. Andrewes*). COCHIN CHINA: Saigon (*Pavie*).

Type in the Dresden Museum.

340. **Arrhines tutus**, *Fst.*

Arhines tutus, Faust,* Ann. Mus. Civ. Genova, xxxiv, 1894, p. 194 (1895).

Very closely allied to *A. hirtus*, Fst., and agreeing with the description of that species except in the following particulars:—

Rostrum distinctly dilated at the apex. *Antennæ* with the scape rather more slender and abruptly clavate at the apex, the funicle with joint 1 not or only slightly longer than 2. *Prothorax* with the punctures rather more separated, the spaces between them scarcely aciculate and more shiny. *Elytra* with the dorsal outline gently curved, more gradually declivous behind and without any pre-apical emargination, the apical process more acute.

Length, 6–7 mm.; breadth, 2½–2¾ mm.

BURMA: Tharrawaddy and Moulmein (*G. Q. Corbett*); Victoria Point (*E. T. Atkinson*); Papun, Tenasserim (*Col. Adamson*).

Type in the Genoa Museum.

341. Arrhines lanugineus, *Fst.*

Arhines lanugineus, Faust,* Ann. Mus. Civ. Genova, xxxiv, 1894, p. 195 (1895).

Colour black, with fairly dense narrow bluish-green scales, the elytra sometimes with irregular darker subdenuded patches.

Head finely rugose, the forehead with an elongate central fovea. *Rostrum* strongly dilated at the apex, with very short erect setæ, longitudinally rugose above and with a fine central carina. *Antennæ* piceous, the scape comparatively stout and gradually dilated to the apex, the funicle with joint 1 evidently longer than 2. *Prothorax* slightly broader than long, about as long as the head and rostrum together, the sides rather strongly rounded, broadest about the middle; the upper surface with numerous deep separated punctures, the interspaces subgranulate and not very shiny, with short curved or subdepressed hairs. *Elytra* elongate, parallel-sided from the base to the middle, then gradually narrowed, the dorsal outline gently curved, the posterior declivity rather gradual, the apices with a short sharp process; the intervals slightly convex, indistinctly granulate, especially behind, with doubled rows of dense long soft pale hairs. *Legs* piceous, with sparse green scaling and pale setæ, the femora with a pronounced tooth.

Length, 7¼–8½ mm.; breadth, 2¼–3⅛ mm.

Burma: Bhamo (*Fea*); Maymyo (*H. L. Andrewes*).

Type in the Genoa Museum.

Genus **HOLORRHYNCHUS**, nov.

Type, *Holorrhynchus integrirostris*, sp. nov.

Rostrum with the apical margin truncate and not emarginate, so that the mandibles are almost entirely hidden from above; the epistome transverse, bounded posteriorly by a gently curved carina, behind which lies a broad transverse impression between the antennæ; the scrobes short and broad behind the antennæ, curving inwards and bounded behind by an indistinct oblique carina; mentum almost circular, with a pair of setæ on each side. *Antennæ* with the scape extending well beyond the front margin of the thorax; the joints of the funicle bearing narrow scales, the two basal joints elongate; the club ovate, three-jointed, broadest at the apex of the first joint. *Prothorax* without lobes or vibrissæ behind the eyes. *Scutellum* small, but distinct. *Elytra* much broader than the prothorax, with well marked shoulders and ten striæ, the lateral margin with a shallow notch near the base and a marked sinuation above the hind coxæ. *Sternum*: the front coxæ nearly in the middle of the prosternum, the anterior edge of which is not sinuate; mesepimeron in the form of an isosceles triangle; metepisternum narrow behind the head, widening rapidly in the posterior half. *Venter* with segment 2 longer than 3+4. *Legs*: trochanters without a solitary projecting bristle; femora rather strongly clavate, with a sharp spine-like tooth beyond the middle; the tibiæ with a short perpendicular mucro at the inner apical angle, the hind pair with the corbels open and terminal; the tarsi as in *Myllocerus*.

Range. Assam.

342. **Holorrhynchus integrirostris**, sp. nov.

Red-brown, with dense earthy-grey scaling, the elytra with irregular and variable dark brown patches.

Head with the eyes lateral and moderately convex, the forehead flattened, its width greater than the length of the eye, the sculpture concealed. *Rostrum* evidently longer than the head, as long as broad, the sides subparallel in the basal half, dilated at the apex; the space between the scrobes much narrower than the forehead, the median dorsal area evidently dilated from there to the base, its sides costate, with a broad central furrow, the sculpture hidden by the scaling, except for an abbreviated central carina at the apex. *Antennæ* testaceous brown, the scape fairly strongly curved and with erect spatulate setæ; the basal joint of the funicle stouter but scarcely longer than the second, joints 3 and 4 subequal, the remainder slightly longer than broad. *Prothorax* about as long as broad, the sides moderately rounded, broadest about the middle, the subapical constriction shallow, the basal margin shallowly bisinuate and broader than the apical, which is oblique at the sides; the dorsal surface with traces of coarse punctation showing through the dense scaling, and with a shallow longitudinal impression on each side in the basal half. *Elytra* separately rounded at the base, the shoulders roundly subrectangular, the sides somewhat dilated behind the middle (♀?); the striæ shallow, with rather remote punctures which are scarcely perceptible through the scaling, the intervals slightly convex, with rows of curved and very broadly spatulate setæ. *Legs* testaceous brown, with dense grey scaling and broad raised setæ, the middle tibiæ slightly curved.

Length, 2½–3 mm.; breadth, 1–1¼ mm.

ASSAM: Mazbat, Mangaldai dist. (*S. W. Kemp*—Ind. Mus.).

Type in the Indian Museum.

In general facies this species is not unlike *Myllocerus blandus*, Fst., but apart from the non-emarginate rostrum and the four setæ on the mentum, it may be at once distinguished by its much longer rostrum and narrower prothorax.

ALPHABETICAL INDEX.

All names printed in italics are synonyms.
When more than one reference is given, the page on which the description occurs is indicated by thickened numerals.

acaciæ (Myllocerus), 292.
Achlænomus, 202.
Achlainomus, 202.
Acrocœlopus, 66.
acutipennis (*Brachyaspistes*), 165.
acutipennis (Sympiezomias), 165.
adamsoni (Astycus), 135.
ADELOGNATHI, 28.
adjunctus (Ptochus), 269.
adspersus (Cratopus), 45.
adstringatus (Hadronotus), 62.
adultus (*Astycus*), 133.
ænescens (Hyperomias), 194, **195**.
æqualis (Astycus), 147.
æqualis (*Piazomias*), 147.
afflictus (Ptochus), 265.
agrestis (Dyscheres), 125.
agrestis (Tanymecus), 104.
albicinctus (*Esamus*), 90.
albomarginatus (Tanymecus), 91.
alternatum (Trachyphlœosoma), 276.
amœnus (Otiorrhynchus), 256.
Amphorygma, 281.
Anæmerus, 113.
anamalainus (Myllocerus), 305.
anamalainus (Sympiezomias), 168.
andamanensis (Dereodus), 122.
andrewesi (*Asemus*), 80.
andrewesi (Episomus), 229.
andrewesi (Myllocerus), 346.
andrewesi (Tanymecus), 80.
Anemeroides, 110.
Anemerus, 113.
angulatipes (Myllocerus), 316.
angustatus (Leptomias), 177.
angustatus (Pachynotus), 172, 177.
angustifrons (*Myllocerus*), 301.
angustula (Lepidospyris), 155.
annulipes (*Episomus*), 221.
apicatus (Astycus), 146.
apicatus (Ptochus), 268.
appendiculatus (Episomus), 226.
arcuatus (Episomus), 219.
arduus (Episomus), 239.
arenaceus (Tanymecus), 86.
argyrostomus (Phacephorus), 108.
argyrostomus (*Tanymecus*), 108.
Arhines, 355.
armatipes (Astycus), 141.
Arrhines, 355.
arrogans (Episomus), 244.
asellus (Blosyrus), 33.
asellus (*Curculio*), 33.
Asemus, 68.
assamensis (Ptochus), 269.
assamensis (*Taphrorhynchus*), 199.
Astycophilus, 129.
Astycophobus, 129.
Astycus, 128.
Atmetonychus, 112.
audax (Leptomias), 188.
auratus (Dermatodes), 56.
auricephalus (*Hypomeces*), 116.
auriculatus (*Episomus*), 247.
aurivilliusi (*Episomus*), 241.
aurovittatus (*Astycophobus*), 142.
aurovittatus (Astycus), 142.
aurulentus (*Curculio*), 116.
avarus (Curculio), 207.
avuncularius (Episomus), 232.

ballardi (Tylopholis), 156, **157**.
basilicus (Catapionus), 47, **48**.
bengalensis (Blosyrus), 36.
bengalensis (*Grypnus*) (*Dereodus*), 121.
bengalensis (*Myllocerus*), 337.
bicuspis (Episomus), 215.
bimaculatus (Leptomias), 188.
bimaculatus (Phacephorus), 109.
binodosus (Dermatoxenus), 51.

bipustulatus (Leptomias), 184.
bituberculatus (Leptomias), 179.
bituberosus (*Brachyaspistes*), 198.
bituberosus (Geotragus), 198.
blandus (Myllocerus), 333.
BLOSYRIDES, 30.
Blosyrinus, 31.
Blosyrodes, 38.
Blosyrus, 31.
bomfordi (Eustalida), 57.
boviei (Myllocerus), 313.
Brachyaspistes, 128.
Brachycaulus, 287.
brachycollis (Myllocerus), 324.
BRACHYDERINÆ, 30.
brachyderoides (*Myllocerus*), 272, 292.
brachyderoides (Ptochus), 272.
brachyderoides (*Synolobus*), 272.
brevicollis (Myllocerus), 292.
brevicollis (Ptochus), 267.
brevipennis (Episomus), 241.
brunneus (*Arrhines*), 356.
burmanus (Tanymecus), 80.

cæsius (Scepticus), 65.
canus (Astycus), 151.
cardoni (*Menostoma*), 57.
cardoni (Myllocerus), 339.
carinirostris (*Myllocerus*), 289, 290.
carinirostris (Stelorrhinus), 290.
cataleucus (*Episomus*), 244.
Catapionus, 47.
Cataponus, 118.
catechu (Myllocerus), 310.
Catorygma, 279.
cephalotes (*Asemus*), 78.
cephalotes (Tanymecus), 78.
cerberus (*Anæmerus*), 114.
cerberus (Anemerus), 114.
Cercophorus, 68.
ceylonensis (Amphorygma), 282.
ceylonicus (*Episomus*), 221.
chevrolati (Tanymecus), 79.
chinensis (*Blosyrus*), 35.
chloris (Hyperstylus), 353.
chloritis (*Cercophorus*), 107.
chloritis (Tanymecus), 107.
chloroleucus (*Curculio*), 75.
chloroleucus (Tanymecus), 75.
chrysochlorus (Astycus), 133.
chrysochlorus (*Curculio*), 129, 133.
cinereus (Astycus), 147.
cinereus (Hyperstylus), 353.
cinnamomeus (Astycus), 148.
circumdatus (*Curculio*), 90.
circumdatus (Tanymecus), 90, 91.
circumdatus var. *rusticus* (*Asemus*), 68.
circumdatus *var.* rusticus (Tanymecus), 90.
clathratus (*Episomus*), 219.
CNEORRHINIDES, 47.
cognata (Cyrtozemia), 255.
concinnus (Ptochus), 266.
confinis (*Tanymecus*), 91.
connexus (Episomus), 225.
consocius (Myllocerus), 313.
conspersus (Myllocerus), 321.
convexifrons (Myllocerus), 292.
costatus (*Blosyrus*), 40.
costatus (Leptomias), 176.
costatus (*Parisomias*), 172, 176.
crassipes (*Cercophorus*), 106.
Cratopus, 44.
cretacea (Lepidospyris), 153.
cretaceus (Acrocœlopus), 66, **67**.
cretaceus (*Astycophobus*), 153.
cretaceus (Sympiezomias), 167.
crinitus (Myllocerus), 322.
crinitus (*Omias*), 274.
crinitus (Ptochus), 274.
curtulus (*Cataponus*), 118.
curtus (Leptomias), 180.
curvicornis (*Curculio*), 291, 343.
curvicornis (Myllocerus), 343.
curvipes (Catorygma), 279, **280**.
curvipes (Leptomias), 190.
curviscapus (Tanymecus), 102.
cylindricus (Leptomias), 186.
CYPHIDES, 50.
Cyrtozemia, 253.

deceptor (Tanymecus), 87.
decipiens (Episomus), 234.
decipiens (Sympiezomias), 167.
defoliator (Emperorrhinus), 286.
dejeani (Episomus), 220.
delicatulus (Myllocerus), 304.
demissa (Lepidospyris), 154.
denticollis (Dereodus), 118, **120**.
dentifer (*Curculio*), 347.
dentifer (Myllocerus), 347.
Dereodus, 118.
Dermatodes, 55.
Dermatoxenus, 50.
desquamatus (Myllocerus), 315.
destructor (*Arhines*), 150.
discoideus (*Curculio*), 291, 318.
discoideus (*Macrocorynus*), 318.
discoideus (Myllocerus), 318.
discolor (Myllocerus), 348.
discolor *var.* canescens (Myllocerus), 350.

discolor *var.* uniformis (Myllocerus), 349.
discolor *var.* variegatus (Myllocerus), 348, **349**.
dispar (Cyrtozemia), 253.
dohertyi (Episomus), 233.
doriæ (Astycus), 136.
doriæ (*Lepidastycus*), 136.
doriæ var. *cuprescens* (*Lepidastycus*), 136.
dorsatus (*Curculio*), 320.
dorsatus (Myllocerus), 320.
Drepanoderes, 284.
Dyscheres, 125.

ebeninus (Achlænomus), 202.
ebeninus (*Achlainomus*), 202.
ebeninus (*Astycus*), 147.
echinarius (Myllocerus), 332.
ellipticus (Geotragus), 200.
ellipticus (*Sympiezomias*), 200.
elongatulus (Leptomias), 181.
Emperorrhinus, 286.
Epicalus, 282.
EPISOMIDES, 204.
Episomus, 207.
equestris (Polycleis), 127.
erinaceus (Anemeroides), 110, **111**.
Esamus, 68.
Eustalida, 57.
evasus (Myllocerus), 304.
exaptus (*Corigetus*), 328.

fabricii (*Hypomeces*), 116.
fabricii (Myllocerus), 328.
fabricii var. *dispar* (*Hypomeces*), 116.
fabriciusi (Episomus), 231.
falsus (*Esamus*), 90.
feæ (*Asemus*), 95.
feæ (Tanymecus), 95.
feæ *var.* plumeus (Tanymecus), 95.
feæ *var.* subvittatus (Tanymecus), 96.
femoralis (Astycus), 145.
femoralis (*Brachyaspistes*), 128, 145.
figulus (Episomus), 236.
figulus *var.* nigrosparsus (Episomus), 236.
figuratus (Episomus), 221.
fissicollis (Geotragus), 199.
fistulosus (*Cercophorus*), 106.
flavovittatus (Astycus), 134.
floccosus (*Cercophorus*), 106.
frater (Sympiezomias), 164.
frenatus (Episomus), 230.
frontalis (*Myllocerus*), 317.
fuscus (*Drepanoderes*), 285.

Geotragus, 196.
gestroi (Astycus), 138.
glabrifrons (Astycus), 145.
globulicollis (Pachynotus), 201.
gracilis (Myllocerus), 323.
griseus (Astycus), 129, **144**.
griseus (*Episomus*), 236.
Grypnus, 118.
guttatus (Episomus), 217.
guttulatus (*Hypomeces*), 124.

Hadronotus, 62.
helleri (Dermatoxenus), 54.
helleri *var.* simplex (Dermatoxenus), 55.
helleri *var.* subrotundus (Dermatoxenus), 55.
hercules (*Asemus*), 82.
hercules (Tanymecus), 82.
herthus (Blosyrus), 35.
herthus (*Curculio*), 35.
Heteromias, 172.
himalayanus (*Dereodus*), 121.
himalayanus (Geotragus), 196, **197**.
hirsutus (Myllocerus), 292.
hirticeps (Tanymecus), 98.
hirtus (Arrhines), 357.
hispidulus (Hyperstylus), 354.
hispidus (Myllocerus), 316.
hispidus (Sympiezomias), 166.
hispidus (Tanymecus), 98.
Holorrhynchus, 359.
horni (Astycus), 152.
horrescens (Trachyodes), 277.
horridulus (Ptochus), 262.
humeralis (Episomus), 241.
Hyperomias, 194.
Hyperstylus, 352.
Hypomeces, 115.
hystrix (Blosyrus), 38.

ignavus (Myllocerus), 312.
imbellis (Ptochus), 264.
imbricatis (Peritelus), 275.
immunis (Astycus), 150.
immunis *var.* bilineatus (Astycus), 151.
immunis *var.* suturalis (Astycus), 151.
impallescens (Myllocerus), 342.
impressicollis (Myllocerus), 331.
impressicollis *var.* ephippiatus (Myllocerus), 331.
impressicollis *var.* gestroi (Myllocerus), 332.
improvidus (Myllocerus), 343.
inæqualis (*Atmetonychus*), 112.
inæqualis (*Blosyrinus*), 35.
inæqualis (Blosyrus), 31, **35**.
inæqualis *var.* spongifer (Blosyrus), 36.
indicus (*Cataponus*), 118.

indicus (Dermatoxenus), 53.
indicus (*Grypnus*) (*Dereodus*), 121.
indicus (Tanymecus), 99.
ineptus (Myllocerus), 334.
inermicollis (Episomus), 226.
innocuus (*Asemus*), 93.
innocuus (Tanymecus), 93.
insularis (Scepticus), 63.
integrirostris (Holorrhynchus), 359, **360**.
interruptus (*Blosyrodes*), 40.
invidus (Leptomias), 185.
iracundus (*Esamus*), 97.
iracundus (Tanymecus), 97.
irregularis (Episomus), 221.

jekeli (Leptomias), 181.

kashmirensis (Myllocerus), 308.
kashmirensis (Scepticus), 65.
koubiranus (Tanymecus), 104.
kraatzi (Sympiezomias), 169.

lacerta (Episomus), 223.
lacerta var. *bohemani* (*Episomus*), 222.
Lachnotarsus, 248.
lacordairei (*Asemus*), 89.
lacordairei (Tanymecus), 89.
lætivirens (Myllocerus), 330.
Lagostomus, 55.
languidus (Arrhines), 355, **356**.
lanugineus (Arrhines), 359.
lapsus (Ptochus), 267.
lateralis (*Asemus*), 85.
lateralis (Astycus), 139.
lateralis (*Curculio*), 128, 139.
lateralis (*Lepropus*), 139.
lateralis (Myllocerus), 329.
lateralis (*Tanymecus*), 85.
lateralis var. *subacuminatus* (*Astycus*), 139.
lectus (Tanymecus), 105.
lefroyi (Myllocerus), 340.
lefroyi (Tanymecus), 88.
lentus (*Asemus*), 86.
lentus (Tanymecus), 86.
Lepidastycus, 129.
Lepidospyris, 153.
Lepropus, 128.
Leptomias, 172.
leucocephalus (*Esamus*), 90.
lewisi (Astycus), 149.
limbaticollis (Episomus), 243.
limbatus (Astycus), 142.
limbatus (Ptochus), 270.
limbatus *var.* hampsoni (Astycus), 144.
lineatocollis (Myllocerus), 317.
lineatocollis (*Phyllobius*), 317.
lineatocollis *var.* divisus (Myllocerus), 318.
lituratus (*Cneorhinus*), 179.
lituratus (Leptomias), 179.
lividus (Sympiezomias), 166.
longulus (Leptomias), 189.
longulus (*Parisomias*), 189.
longulus (Tanymecus), 94.
luctuosus (Myllocerus), 326.

Macrocorynus, 291.
maculosus (*Myllocerus*), 351.
madurensis (Myllocerus), 325.
mandibularis (Tanymecus), 96.
manipurensis (Episomus), 225.
manipurensis (Myllocerus), 333.
marginalis (Tanymecus), 85.
marmoratus (*Myllocerus*), 350.
mastos (*Curculio*), 124.
mastos (Dereodus), 124.
Menostoma, 57.
metallescens (Sympiezomias), 170.
mimicus (*Phyllobius*), 304.
minutus (*Corigetus*), 325.
minutus (Myllocerus), 325.
mixtus (*Asemus*), 84.
mixtus (Tanymecus), 84.
modicus (Tanymecus), 103.
molarius (*Myllocerus*), 337.
montanus (Episomus), 219.
montanus var. *dejeani* (*Episomus*), 220.
montarum (Achlænomus), 203.
multicostatus (Myllocerus), 292.
musculus (*Myllocerus*), 337.
mutabilis (*Myllocerus*), 345.
Myllocerus, 291.

napæus (Ptochus), 270.
NAUPACTIDES, 44.
nebulosus (Episomus), 232.
necopinus (Myllocerus), 335.
neglectus (Astycus), 135.
nicobarensis (Cratopus), 46.
nigropustulatus (Episomus), 235.
nigrosparsus (*Episomus*), 236.
nigrosuturalis (Myllocerus), 308.
nilgirensis (Amphorygma), 281.
nilgirinus (Episomus), 222.
nodicollis (Myllocerus), 341.
nodulipennis (Blosyrodes), 43.
nodulipennis (*Strophosomus*), 43.
nodulosus (Blosyrodes), 42.
nodulosus (*Cyphicerus*), 273.
nodulosus (Ptochus), 273.
NOTHOGNATHIDES, 250.
Nothognathus, 250.
noxius (Ptochus), 271.

noxius (Scepticus), 64.
noxius (*Thylacites*), 64.
nubeculosus (*Episomus*), 223.
nubifer (Scepticus), 65.
nubifer (*Thylacites*), 65.
nubilosus (*Myllocerus*), 345.

obliquus (Episomus), 246.
oblongus (Episomus), 243.
obovata (Tylopholis), 158.
obscurus (*Cneorhinus*), 201.
obscurus (Tanymecus), 83.
obstrusus (Episomus), 240.
obuncus (Episomus), 231.
oculatus (*Astycophilus*), 140.
oculatus (Astycus), 140.
oculatus *var.* levicollis (Astycus), 141.
oniscus (Blosyrus), 33.
oniscus (*Curculio*), 31, 33.
oniscus var. *olivieri* (*Blosyrus*), 33.
orientalis (*Curculio*), 116.
ornatus (Blosyrus), 37.
OTIORRHYNCHIDES, 252.
OTIORRHYNCHINÆ, 204.
Otiorrhynchus, 255.
ovulum (Ptochus), 265.

Pachynotus, 201.
pætus (Myllocerus), 303.
paganus (Dermatodes), 55.
palliatus (Curculio), 68.
pallipes (Hyperstylus), 352.
parcus (Polycleis), 127.
Parisomias, 172.
Parapionus, 205.
parvus (Tanymecus), 101.
pauper (Myllocerus), 322.
penicillatus (*Tanymecus*), 106.
penicillatus (Xylinophorus), 193.
percussus (Ptochus), 272.
peregrinus (*Anæmerus*), 112.
peregrinus (Atmetonychus), 112.
peregrinus (*Curculio*), 112.
peregrinus (Otiorrhynchus), 257.
peregrinus (Xylinophorus), 192.
peroteti (*Brachyaspistes*), 164.
perroteti (Sympiezomias), 164.
persimilis (Leptomias), 187.
personatus (Brachycaulus), 289.
pertusiventris (*Asemus*), 81.
pertusiventris (Tanymecus), 81.
Phacephorus, 107.
philippinensis (*Blosyrus*), 33.
PHYLLOBIIDES, 278.
Piazomias, 159, 172, 196, 201.
pictus (*Cneorhinus*), 177.
piger (Tanymecus), 87.
pilifer (Myllocerus), 307.
planoculis (Myllocerus), 309.
planoculis (Ptochus), 273.
plebeius (Hyperstylus), 354.
plumeus (*Asemus*), 95.
pollinosus (Dereodus), 121.
pollinosus (*Hypomeces*), 121.
Polyclæis, 127.
Polycleis, 127.
polygrammus (*Esamus*), 90.
porcellus (Leptomias), 180.
porcellus (Ptochus), 259.
postfasciatus (Myllocerus), 319.
posticalis(Brachycaulus), 287, **288**.
posticus (Myllocerus), 292.
præteritus (Sympiezomias), 163.
prætermissus (Leptomias), 186.
prainæ (*Episomus*), 228.
prasinus(*Brachyaspistes*), 162.
prasinus(Sympiezomias), 162.
prasinus, *var.* subcostatus (Sympiezomias), 163.
pretiosus (Myllocerus), 314.
princeps (*Esamus*), 97.
princeps (Tanymecus), 97.
procerus (Myllocerus), 323.
prodromus (Xylinophorus), 191, **192**.
profanus (Episomus), 237.
profanus var. *punctiger* (*Episomus*), 237.
propinquus (*Asemus*), 92.
propinquus(Tanymecus), 92.
protervus (*Tanymecus*), 76.
Ptochus, 259.
pubescens (Blosyrodes), 41.
pubescens (Myllocerus), 338.
pudibundus (Episomus), 242.
pulverosus (Dereodus), 125.
pulverulentus (*Curculio*), 116.
pulviger (*Curculio*), 116.
pumilus (Myllocerus), 311.
pusio (Ptochus), 269.
pyriformis (Episomus), 239.
pyriformis (Ptochus), 263.

quadrimaculatus (Episomus), 237.
quadrinodosus (Blosyrodes), 38, **39**.
quadrisignatus (Dermatoxenus), 52.
quadrivirgatus (*Astycus*), 134.
quatuornotatus (Episomus), 228.

raucus (Episomus), 222.
repandus (Episomus), 233.
retrahens (Myllocerus), 292.
rhacusensis (Otiorhynchus), 255.

roscidus (Myllocerus), 344.
rugosus (*Curculio*), 112.
rugosus (Dyscheres), 126.
russicus (Otiorrhynchus), 257.
russicus (*Phacephorus*), 108.
rusticus (*Curculio*), 117.
rusticus (Myllocerus), 306.
rusticus (*Tanymecus*), 90.
rutilans (*Curculio*), 139.

sabulosus (Leptomias), 186.
sabulosus (Myllocerus), 336.
sagax (Episomus), 235.
saturatevireus (Myllocerus), 292.
Scepticus, 63.
schönherri (*Episomus*), 241.
schönherri (*Piazomias*), 172.
schoutedeni (Nothognathus), 250, **251.**
sciurus (*Curculio*), 76.
sciurus (Tanymecus), 76.
scrobicollis (Leptomias), 181.
seclusus (Tanymecus), 100.
semivittatus (Catapionus), 49.
sennæ (Episomus), 245.
sericeus (Myllocerus), 309.
serratipes (Sympiezomias), 169.
setosum (Trachyphlœosoma), 275.
setulifer (Myllocerus), 312.
setulosus (Leptomias), 177.
severini (Myllocerus), 342.
Simallus, 207.
similis (Sympiezomias), 171.
simplex (Myllocerus), 314.
simplex (Tanymecus), 83.
sinhalensis (Cratopus), 46.
smaragdinus (Myllocerus), 323.
sparsus (Dereodus), 118, **121.**
sparsus (*Hypomeces*), 121.
sparsus var. *prasinus* (*Dereodus*), 121.
spectator (Myllocerus), 340.
spinifer (Leptomias), 176.
spongifer (*Blosyrus*), 35.
spurcatus (*Myllocerus*), 345.
squamosus (*Curculio*), 115, 116.
squamosus (Hypomeces), 116.
Stelorrhinus, 289.
stevensi (Lachnotarsus), 248, **249.**
stoliczkæ (Leptomias), 182.
Stomodes, 255.
strabo (Ptochus), 263.
strigifrons (Xylinophorus), 194.
striolaticeps (Otiorrhynchus), 258.
stultus (Leptomias), 184.
suavis (Myllocerus), 335.
subaureus (*Tanymecus*), 90.
subfasciatus (*Brachyaspistes*), 196, 199.
subfasciatus (Geotragus), 199.
subfasciatus (Myllocerus), 345.
subfasciatus *var.* mutabilis (Myllocerus), 346.
subfasciatus *var.* spurcatus (Myllocerus), 346.
subglaber (Myllocerus), 305.
subglaucus (Myllocerus), 339.
submarginalis (Astycus), 138.
submarginalis (*Lepidastycus*), 138.
subnitens (Episomus), 245.
subvittatus (*Asemus*), 95.
sulcicollis (Episomus), 247.
sulcicollis (Leptomias), 187.
sulcicollis (*Simallus*), 207, 247.
sulphuratus (Sympiezomias), 167.
superciliosus (*Blosyrus*), 33.
suspiciens (Myllocerus), 306.
suturalis (*Strophosomus*), 150.
sylhetensis (Astycus), 137.
Sympiezomias, 159.

TANYMECIDES, 58.
Tanymecus, 68.
Taphrorhynchus, 196.
tenuiclavis (Myllocerus), 327.
tenuiclavis *var.* inferior (Myllocerus), 328.
tenuicornis (Myllocerus), 321.
tesserula (*Myllocerus*), 320.
tetricus (Tanymecus), 101.
tomentosus (Curculio), 113.
Trachyodes, 277.
TRACHYPHLŒIDES, 275.
Trachyphlœops, 275.
Trachyphlœosoma, 275.
transmarinus (*Curculio*), 337.
transmarinus (Myllocerus), **337**, 343.
triangularis (Cratopus), 44.
tuberculatus (*Blosyrus*), 35.
tuberosus (Blosyrodes), 42.
tusicollis (Myllocerus), 330.
tutus (Arrhines), 358.
Tylopholis, 156.

undatus (Myllocerus), 350.
undecimpustulatus (Myllocerus), 350.
undecimpustulatus, *var.* maculosus (Myllocerus), 351.
undecimpustulatus, *var.* marmoratus (Myllocerus), 352.
undecimpustulatus, *var.* pistor (Myllocerus), 350, **351.**
unicolor (*Curculio*), 117.
unicolor (Hypomeces), 117.

uniformis (Episomus), 238.
unisulcatus (Blosyrus), 38.

variabilis (*Astycus*), 133.
varicolor (Parapionus), 205, **206.**
variegatus (Blosyrodes), 40.
variegatus (*Blosyrus*), 40.
variegatus (*Myllocerus*), 348.
varius (Nothognathus), 252.
velatus (Brachyaspistes), 159.
verlorenii (*Cercophorus*) (*Tanymecus*), 106.
verlorenii (*Macropterus*), 68, 106.
verlorenii (Tanymecus), 106.
vermiculatus (Dermatodes), 50.
verrucicollis (Leptomias), 183.
verrucosus (Blosyrodes), 41.
versicolor (Tanymecus), 93.
versutus (Episomus), 227.
versutus (Tanymecus), 100.
vigilans (Dereodus), 123.
vilis (Phacephorus), 107.
virgatus (Epicalus), 282, **283.**
viridanus (*Curculio*), 301.
viridanus (Myllocerus), **301,** 304.
viridifasciatus (Drepanoderes), 284, **285.**
viridiventris (*Esamus*), 85.
viridulus (Hadronotus), 62.
viridulus (Myllocerus), 309.
vitticollis (Arrhines), 357.

waltoni (Leptomias), 189.

xanthurus (*Cercophorus*), 84.
xanthurus (Tanymecus), 84.
Xylinophorus, 191.

zeylanicus (Myllocerus), 315.

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